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U.S. NAVY: A HISTORY OF STAGNATION AND INNOVATION

by

Benjiman D. Coyle

September 2014

Thesis Advisor: Donald Abenheim
Second Reader: Daniel Moran

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This thesis examines four periods of the U.S. Navy's history, each following a major conflict that perpetuated a decline in institutional and strategic focus, and then ending in a rebirth of innovation. The object is to place the events drove the Navy toward stagnation into historical context and identify similarities between the cycles of stagnation and innovation.

The central questions this thesis seeks to answer are: (1) Do shrinking budgets and austerity perpetuate stagnation? (2) What are the similarities and differences between each of the cycles on a macro level? (3) What are the drivers for stagnation and innovation in the Navy? This thesis concludes that a cycle does indeed exist and that circumstances being equal several similarities reoccur time and time again. The thesis also proposes that although it is probable that the will Navy repeat these cycles in the future, that they may be mitigated using proper lessons of the past.

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U.S. NAVY: A HISTORY OF STAGNATION AND INNOVATION

Benjiman D. Coyle
Lieutenant, United States Navy
B.A., University of Nevada, Reno, 2005

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Author: Benjiman D. Coyle

Approved by: Dr. Don Abenheim
Thesis Advisor

Dr. Dan Moran
Second Reader

Dr. Mohammed Hafez
Chair, Department of National Security Affairs

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ABSTRACT

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I. U.S. NAVY AND THE MAKING OF STRATEGY: STAGNATION AND REGENERATION

A. RESEARCH QUESTION

The U.S. Navy stands at a parting of the ways in the year 2014 that requires the use of the past for something more than merely heritage and tradition. The prospect of great power conflict in Asia and Europe adds a new urgency to the fate of the U.S. Navy, which has, drifted into neglect in the past two decades after a period of exertion in at the close of the Cold War. In this matter, a view to the past is helpful, especially from a former U.S. president whose biography has been of late misrepresented, but whose deeds were crucial to the rise of American naval power. In his annual message to Congress in 1914, Woodrow Wilson stated, "A powerful Navy we have always regarded as our proper and natural means of defense… never of aggression or of conquest. But who shall tell us now what sort of Navy to build?"[1] In an epoch of naval enthusiasm, President Wilson highlighted a common question asked by policy makers in a maritime democracy, both past and present: What kind of Navy do we need and who should dictate its purpose, size and strength? The other part of the president's proclamation that the nation has always had a powerful Navy is an inaccurate one, rather, only since the end of the 19th century did the Unite States aspire to have a powerful Navy. It has been over the second half of the life of the nation that it has possessed a naval force on the scale of what had been the leading navies of the world of that era. The history of the Navy and its strategy diverges from the bright record so often invoked by advocates of naval power, but one which ignores the cyclic nature of naval power and the cycles of decline and regeneration that are at the very core of its essence. All too often, the Navy has seen falling budgets, shrinking forces, strategies that conflict with forces and weapons, and moments of innovation followed by resurgence and growth, which have been central to national survival and the character of the U.S. Navy as an institution of American statecraft.

[1] Woodrow Wilson, "Second Annual Message to Congress, December 8, 1914" American Presidency Project, accessed February 15, 2014. http://www.presidency.ucsb.edu/ws/ index.php?pid=29555&st=&st1.

During four distinct periods; reconstruction through the 1890s, the end of WWI to 1938, the end of WWII to 1960, and the Vietnam conflict to 1980, the Navy has suffered through cycles of stagnation followed, in turn, by epochs of innovation and regeneration.[2] These cycles have been characterized by shrinking budgets, diminishing force size and capability, absence of strategic goals, and a capability strategy mismatches.[3] During reconstruction, the Navy reverted to sail from steam and struggled with strategic focus. Should they focus on harbor defense, guerre de course or overseas presences and would they use monitors or cruisers?[4] In the wake of the Great War surface force size was reduced from 365 units to 137; due in part to the Washington Naval Treaty as well as to the international system of the epoch as well as the Republican statecraft of pacifism and a return to normalcy.[5] The reduction in force size, budget limitations, the advent of submarine warfare and naval aviation lead to stagnation in the Navy. This stagnation was only ended by Pearl Harbor and the forced learning curve of war, but the Navy would enter another cycle following WWII.[6] It would not be until the placements of the nuclear missiles on submarines that the Navy would it reemerge from its funk. The last cycle would be, in part, a product of Vietnam Syndrome and institutional survival, where reemergence would not occur until the Reagan administration.[7]

The question to be examined in each of these periods is: what were the internal and external forces that shaped each point in the reformative cycle of Navy? That is, what forces outside and within the Navy contributed to such stagnation and which forces, both external and internal, moved to an epoch of regeneration?

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[2] Don Abenheim, "Strategic Development in the U.S. Navy; The Search for Context: Four Case Studies" (Working Papers, Naval Postgraduate School, 2014), 1.

[3] Ibid.

[4] Myron J. Smith, *The American Navy, 1865-1918: A Bibliography* (Metuchen, NJ: The Scarecrow, 1974) vii.

[5] "U.S. Navy Active Ship Force Levels, 1886-Present," U.S. Naval History and Heritage Command, June 10, 2011, http://www.history.Navy.mil/branches/org9-4.htm.

[6] Abenheim, "Strategic Development in the U.S. Navy," 2.

[7] Ibid.

It is the intent of this study to draw out the explication of these reoccurring themes in each epoch and to establish that lessons may be learned and applied to the future.

B. IMPORTANCE

In 2012, President Barack Obama stated: "We can't afford to repeat the mistakes that have been made in the past—after World War II, and after Vietnam—when our military policy was left ill-prepared for the future."[8] Similarly in 2011, Secretary Leon Panetta told Congress: "After very major conflict—World War I, World War II, Korea, Vietnam, and the fall of the Soviet Union—what happened was that we ultimately hollowed out the force."[9] The imperative in civil military relations and the formulations of strategy to strike the proper balance forms relevant topics for lawmakers and Navy planners. Both pleas from Obama and Panetta for such funding reflect a limited understanding of all of the longer cycles of collapse and revival that have manifested themselves in such stagnation, unpreparedness and a hollow force. Reductions from a bloated war time force and periods of austerity have at times been beneficial for the Navy and for policymakers in Washington,[10] a fact that is generally ignored but which the young strategist must analyze in this study.

The Navy has operated for the last decade with an unprecedented budget and is now in a period of budget reduction. The Navy and policymakers are at a pivotal point where they can either shape the force needed for the future while meeting current demands or they can make poor choices based on misinterpretations of the past or enter a period of stagnation. By examining historical context for periods when the Navy's budgets were drastically reduced and the strategic muddle that ensued, policymakers and planners can avoid the pitfalls of the past.

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8 Melvin Leffler, "Defense on a Diet: How Budget Crises Have Improved U.S. Strategy," F*oreign Affairs* 92, no. 6 (2013): 65.

9 Ibid.

10 Ibid.

By providing a selective and interpretive narrative of four distinct periods; reconstruction through the 1890s, the end of WWI to 1938, the end of WWII to 1960, and the Vietnam conflict to 1985, context can be created to understand the impact of different factors that resulted in stagnation and innovation. Understanding the influence of these internal and external factors provides a mental foundation for the formulation maritime strategy and from there the foundation for a Navy capable of meeting emerging challenges.

This thesis seeks to add to the fields of study of bureaucratic politics, organizational behavior, civilian-military relations, international relations, and foreign policy through the interpretation of a historic narrative of the Navy. The knowledge here should form an essential tool for the young strategist and all those who must think and act about war at sea and the tools to wage such conflict.

C. HYPOTHESES

This thesis will focus on the internal and external factors that have led to periods of institutional stagnation within the Navy and its strategic implications; it will also look at the methods used to extricate the Navy from its muddle. Based upon the surveyed literature, the history of the Navy can be broken down into four periods that represent cycles of reduction, stagnation, innovation and reemergence. By presenting each period in as a historic narrative, the selected events that impacted each part of the cycle can be given proper context, which will prevent an image of inevitable follies from taking place. The narrative will also separate out historic interpretations of heritage from facts that often confuse the story.

The first period starts at the end of the American Civil War, when the Union Navy's budget shrank from $124 million to $2 million in one fiscal year, and the fleet was forced to return to sail and wood from steam and steel due to budgetary constraints.[11] This period did not come to a conclusion until the 1880s and is fraught with ideological

[11] "Budget of the U.S. Navy: 1794 to 2004," Naval History and Heritage Command, accessed February 21, 2014, http://www.history.Navy.mil/library/online/budget.htm.

inconsistencies like ships painted in peace colors (white and buff), but armed with the newest ordinance available and fleet of monitors built for river and costal defense conducting overseas missions.[12] During the Navy's so called Dark Age in the 1870s and into the 1880s, the fleet was sapped by a worldwide economic depression, post war austerity, and the civilian-military relations problems that were typical during this period in American politics.[13] It would not be until creation of the Naval War College and the professionalization of the Navy that the institution was able to pull itself free from brink of collapse and focus on policies that would shape force for the future and make America a world power.

The second period stretches from the end of the Great War to the bombing of Pearl Harbor. The First World War upended many of the strategic visions held for the American battle fleet and left Navy in ideological disarray. The strategic vision of Alfred Thayer Mahan and American tradition led the nation to plan for a war with Great Britain that would pit powerful surface ships of the line against each other in decisive battles. This line of thought was tossed out the window when the American fleet was integrated into the British Grand Fleet, and the focus of the war shifted from the failing of surface ships at the Battle of Jutland to make a decisive victory to countering a war of guerre de course being carried out by German submarines. Although the Navy continued to maintain a steady strain of strategic foresight with War Plan Orange, in reality, and to be honest about the civil military and diplomatic setting, it was preoccupied by several other significant events at home and abroad that led to stagnation. The combination of the Washington Naval Treaty, austerity, a desire by Republicans to retreat to place of international "normalcy," which is to say, isolation, a new peace system highlighted by the Kellogg-Briand Pact, and an attempt by the U.S. Navy to seize the rein of the seas form the British led to a period of stagnation. It could be possible to focus on this period as a battle between air power and battleships for relevance or underservice rivalry over their view of what would be the next dominant form of warfare in the future. These are

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[12] Smith, *The American Navy*, vii.

[13] R. C. Blanco, "The U.S. Navy Owes T.B.M. Mason," *Naval History* 19, no. 3 (2005): 26, http://search.proquest.com/docview/203492565?accountid=12702.

important parts of the narrative of the Navy, but should not be focused on as the sole cause.

The third period covers the time between the end of WWII ca 1946 and the placement of solid fuel nuclear missiles on submarines in 1959. Over this 15-year period, the Navy fought for relevance in an atomic era dominated by the emphasis on strategic bombing and a new military branch that sucked up funds from both the Army and the Navy. The new Soviet menace, which at sea was principally one of the silent service, placed a threat on Eurasia that lacked the vulnerability to seapower that the previous Japanese threat had held. The conflict in Korea briefly ended a period of austerity similar to earlier cycles, but influxes of men and money do not solve strategic problems. The conflict between traditional strategy and services rolls in the wake of technological change and strategic thinking created an institutional paralysis for the Navy. The post-Korea austerity and civilian-military relations that followed only helped to reinforce the stagnation that was present, but this is a complicated period, and there is more to it than austerity and atomic strategy.

The fourth period concerns the legacy of Vietnam, air war stalemates, civil military racial problems, obsolete ships left over from the WWII, emaciated budgets, inflation, economic recession and a rising Soviet challenge on the high seas. This period differs from earlier cycles in that it suffered from new challenges other than austerity and aging ships. The traditional factors that influenced stagnation were still present and relevant, but by only focusing on money and ships the wrong picture would emerge. It would not be until the Reagan Administration and Secretary John Lehman that the Navy would reemerge with a new strategic purpose and goal ending its cycle mediocrity and unimportance.

Throughout each of these epochs it will be important to provide institutional, civil military and international context for the decisions made by various policy makers from Secretary Gideon Welles in the mid-19th century to Secretary Lehman in the late 20th century. Much of narrative could be a story of the Secretaries of the Navy, but that would eliminate the importance of such naval figures as Mahan and Arleigh Burke who made tremendous contributions to the Navy. Only through analysis of these complex

periods, where proper context is given to pivotal decisions, can understanding of the causes of institutional stagnation emerge.

D. LITERATURE REVIEW

The history of any large organization can be complicated and multidimensional. These aspects are then intensified by organization being one of military in nature. Overall, the majority of the history of the Navy is focused around battles and heroic individuals. Rarely do navies seek to write histories that focus on interwar, peace time or periods plagued by mediocrity. Often as agencies that are constantly seeking funding and manning, it is more in their interests to highlight heroic stories and the great deeds they accomplished. It is uncommon for the histories of the Navy to provide comprehensive backgrounds for the pivotal moments that shaped the organization in times of peace.[14] Making the connection between the key points in the history of the Navy and the forces that shaped it can be complex. A substantial number of sources shall be required to gain effective understanding of the subject areas and this thesis's intersection point. More than just providing an elaborate timeline based on history books, an analysis of events based on paradigms of organizational behavior, civilian-military relations, bureaucratic politics, and international relations will be required for this thesis. As the thesis will be broken down into four distinct periods, much of the literature can also be broken down to reflect these periods. The literature that does not cover a historic period, like Glenn Hastedt's textbook *American Foreign Policy* will be useful for defining the importance of bureaucratic decision making as it relates to policy formation.[15]

The Navy suffered from its first dark age in the wake of the Civil War regressing to its institutional habits and preferences from before the war. This regression was complete with technology, manning and strategic thinking. The lessons of war had taught the Navy of the benefits of steam over sail, along with hindrance of using them in concert, but for various reasons the Navy would release a general order in 1969 all ships

14 Dudley Knox, *A History of the United States Navy* (New York: GP Putnam's Sons, 1948) xi.

15 Glenn Hastedt, *American Foreign Policy*, 9th ed. (New York: Pearson, 2011), 224.

to have full sail power.[16] It would not be until the 1890s that the Navy would be able to reemerge from its funk only to become a world power. It is during this period that the Sprouts write a historic exposition using primary sources and supplemented secondary writings in their text *The Rise of American naval Power 1776-1918.* Their analysis of the Navy during reconstruction covers a gambit from conflicting visages of what the role of the Navy should be during times of peace, where the Navy fits into a westward expanding nation, and the political economic and strategic arguments for and against technological advances.

Commodore Dudley Knox sought to provide an accurate narrative for what he felt were the most important events in U.S. Navy's history, from its formation to the close of the Second World War. In his book, he attempts to provide evidence that connects the relationship between naval affairs, economic, domestic affairs and other broad aspects of national life during times of peace. The connections are then used to explain their impact on pivotal events that helped transform the Navy for better or for worse. Knox was keen to note that few of his historian predecessors had access to records of naval affairs and often mistook stories of heritage for fact. This text provides coverage for two of the epochs that will be covered in this thesis and the events pursuant to them that shaped the thoughts of policy makers and naval planners.

This thesis also seeks to cover the moments of innovation that resurrected the Navy from its strategic and institutional muddle. In this, elements of organizational learning can be inferred. One of the biggest contributing factors to pulling the Navy out its dark period following the Civil War was the advent of a Naval War College. Ron Spector's *Professors of War* covers the role of the War College in the professionalizing of the Navy and its effect on shaping policy. Spector also takes note that War College's formation was a reflection of the period, and during this time it was the influence of civil society on the Navy that helped to professionalize it and create dogmas that remain to this

[16] Harold Sprout and Margaret Sprout, *The Rise of American Naval Power 1776-1918* (Princeton, NJ: Princeton University Press, 1939) 167.

day.[17] This text also draws on civilian military relations and international relations to explain the actions of the Navy and policy makers during formative junctures in the Navy's history.

The second period of stagnation for the Navy comes out of the mire created by the First World War. The war in Europe was devastation for the Navy, the advent of the German submarine warfare disproved the predicted way of naval warfare and advent of naval aviation was adverse to the battleship centric culture of the Navy.[18] William McBride's article "Unstable Dynamics of a Strategic Technology," presents an argument for the formation of an episodic stagnation that did not end until Pearl Harbor. McBride makes references to the drastic reduction in funding to Navy by President Hoover as source of stagnation, during the interwar years several technological advancements in naval architecture were taking place, but the Great Depression prevented national spending on naval advancement. The article also notes the dynamics of the officer corps during this time. At the end of WWI, the Navy was full of battleship officers that sought to maintain dominance over the newly emerged factions of Air and Subsurface. The period of peace that followed WWI also carried negative public sentiment toward capital warships; in the minds of the people, the ships represented war and destruction.[19]

Williamson Murray in a lecture to Pentagon presented the interwar period as a case study to show differences between two branches in areas stagnation and innovation. He argues that systemic problems prevented the Navy from addressing the problems that were holding it back from transforming into the force that would be needed to combat the rising German and Japanese threats.[20] Part of Murray's thesis is that peacetime itself is a counter environment to innovation and strategic development. Aside from the systemic

17 Ronald Spector, *Professors of War: The Naval War College and the Development of the Naval Professional* (Newport, RI: Naval War College Press, 1977), 4.

18 William McBride, "Unstable Dynamics of a Strategic Technology: Disarmament, Unemployment, and the Interwar Battleship," *Technology and Culture* 38, no. 2 (1997): 338, http://www.jstor.cog/stable/3107127.

19 Ibid., 389.

20 Williamson Murray, *Two Lectures: Transformation and Innovation: The Lessons of the 1920s and 1930s; Looking at Two Distinct Periods of Military Innovation: 1872–1914 and 1920–1939* (Alexandria, VA: Institute for Defense Analyses, 2002), 97.

problems that addressed the Navy, international agreements on the limitation of naval power were both harmful and beneficial for the Navy. The Washington Naval Treaty limited battleships in size and number, but did not address carriers, allowing for the development of a new capability and innovation.

The third period of stagnation began much the same as the two previous periods, in a post-war disarmament. The reduction of the Navy from nearly 7000 ships at the end of WWII to 632 at the onset of Korea played less of role in pulling the Navy into strategic mire than did the advent of the atomic bomb.[21] Lloyd Graybar's article "The 1946 Atomic Bomb Tests," argues that the atomic bomb created a contention between the Navy and the Air force over the role as the nation's preferred defender.[22] The atomic bomb, specifically the testing on the bomb on naval ships at Bikini Atoll, threatened the relevance of the Navy more than anything else. The usefulness of surface ships had slowly been questioned with the technologic advents of the submarine and the airplane, but the obliteration of naval surface vessels at Bikini threatened their technological lives.[23] The brief rearmament caused by Korea only postponed the strategic fight for the Navy's relevance in an atomic era. Graybar's article covers the Navy's fight for self-preservation in the first days of the Cold War and the strategic problems it incurred and why.

Admiral Arthur Radford served in the Navy from 1916 to 1957: during his active service he rose to the position of chairman of the Joint Chiefs of Staff. His legacy was one of an instigator, innovator and forward thinker; he was even a key figure in the Revolt of the Admirals.[24] Radford's memoirs cover two of the epochs researched in this thesis and provide an insider's view. Some of the influential events that Radford cites as

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21 "U.S. Navy Active Ship Force Levels," http://www.history.Navy.mil/branches/org9-4.htm

22 Lloyd Graybar, "The 1946 Atomic Bomb Tests: Atomic Diplomacy or Bureaucratic Infighting?" T*he Journal of American History* 72, no.4 (1986): 890, http://www.jstor.org/stable/1908895.

23 Ibid., 891.

24 Phillip Meilinger, "The Admirals' Revolt of 1949: Lessons for Today," *Parameters: U.S. Army War College Quarterly* 19, no. 3 (1989) 94, http://oai.dtic.mil/oai/oai?verb=getRecord&metadataPrefix=html &identifier=ADA517025.

causes of stagnation in the wake of WWII are the unification of the branches under the Department of Defense (DOD), the Revolt of the Admirals—which was a fight between the Air force and the Navy to maintain aviation capabilities, amidst budget fights, the austerity suffered under Truman and then again Eisenhower and the B-36 with its ability to project atomic strategy and undermine the relevance of the Navy. Radford ends his memoirs later in life while reflecting on Vietnam and was able to predict some of the factors that would lead to another period stagnation for the Navy.

John Lehman was secretary of the Navy during Reagan's administration and is most closely associated with the 600-ship Navy of the 1980s and a revival of American naval prestige.[25] In his book *On Seas of Glory* the former secretary provides a comprehensive history of the Navy covering the institutional muddles that the Navy struggled through in the wake of the Second World War and Vietnam. The text is both selective and interpretive in its survey of history, allowing for the views of both a policy maker and Navy insider. Lehman wraps up his book with the fight for a 600-ship Navy and innovations in technology that helped drag the Navy out of its funk to meet an emerged Soviet threat on the high seas.

E. METHODOLOGY

The methodology to be employed in this thesis is that of historical study of the Navy. The history of the Navy will be broken down into four periods, each culminating after a major conflict and then ending after the Navy was able to address the issues that caused its regression and stagnation. The first period begins in the wake of the American Civil War and continues until the 1890s. The second period stretches from the Treaty of Versailles in 1919 and lasts until the bombing of Pearl Harbor. The third period begins in the disarmament that followed WWII and did not end until 1960 when nuclear missiles were placed on submarines. The last period of stagnation to be surveyed comes in the wake of the Vietnam War and goes through the rise of the 600-ship Navy of the 1980s.

25 John Lehman, *On Seas of Glory: Heroic Men, Great Ships, and Epic Battles of the American Navy* (New York: Touchstone, 2001) x.

The analysis will focus on the events, policies, and decisions that shaped the Navy during these eras and the context in which these actions too place.

The most important sources for this thesis will be historical texts that survey the Navy during peace times, as the majority of histories focus on pivotal battles during wars. Of the sources surveyed, the majority are secondary sources written by Navy officers or other members of the military to include Knox's *A History of the United States Navy* and Mahan's *The Influence of Sea Power upon History*. Both of these texts rely heavily on primary sources, such as naval order and official communications.

The issues raised in the surveyed articles from scholarly journals, will offer greater insight into key events and provide varying levels of analysis. During the Navy's dark age, primary sources cited in *The Rise of American Naval Power* note that steam capable ships were ordered to regress to sail power.[26] Lance Buhl's article in *The Journal of American History* goes into further detail to explain the resistance of the Navy toward technology from 1865 through 1869.

Radford's memoir raises the issues that the advent of the atomic bomb had on the Navy, while Graybar's article "The 1946 Atomic Bomb Tests: Atomic Diplomacy or Bureaucratic Infighting," offers alternate arguments to explain the effects of the bomb. In the same realm, Meilinger's article in *Parameters* about the Revolt of the Admirals provides greater insight and alternative explanations for the battle between the branches for missions and budgets.

In addition, historical and contemporary works about military innovation, organizational learning, and bureaucratic decision making will be useful for proving greater depth of understanding of events that helped to stagnate the Navy and then resurrect it from its funk.

26 Sprout, *The Rise of American Naval Power 1776-1918*, 167.

F. OVERVIEW

This thesis is organized into six chapters. Chapter I provides an overview of the major research question and the importance this topic maintains in current strategic studies. This chapter also includes a literature review exploring organizational stagnation and examples of evidence of innovation.

The second chapter covers the Navy's dark age, which occurred from 1865 to the 1890s. It addresses issues of rapid demobilization, austerity, institutional entrenchment and retrenchment. It also covers the internal and external factors that shaped the formation of Naval War College and professionalized the Navy.

The third chapter reflects on the mass disarmament that followed the Great War and all of the factors that held the Navy back from preparing for the future. The Washington Naval Treaty, the advent of new warfares and the institutional staffing that preventing greater innovation and growth. It also covers recommendations made by War Plan Orange and the impact of shifting strategic focuses.

The following chapter picks up at the end of WWII and continues until the placement of nuclear missiles on submarines carved out a strategic spot for the Navy. Two periods of austerity are addressed: a short reemergence during Korea that failed to provide any long-range benefit for the Navy, the Revolt of the Admirals, and forays into bureaucratic infighting.

The fifth chapter follows the Vietnam War through the buildup of the 600-hundred ship Navy proposed by Secretary Lehman. This period is different from the others in that it covers more than just shifting strategic priorities and austerity, and addresses the way the Navy dealt with the Vietnam Syndrome, the institutional rankness racism and eroded prestige.

Chapter VI concludes the thesis with a summary of the findings, interpretations, and recommendations, as the Navy enters another period of austerity and downsizing that could result in stagnation.

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II. THE NAVY'S DARK AGE

As the United States closed the chapter on its Civil War in 1865, then Secretary of the Navy Gideon Welles stated that "the country now puts off the formidable naval armor which it has assumed to vindicate upon a mighty scale that supremacy of the national law which is the very life of our union," while warning that "yet true wisdom directs that this policy of retrenchment in the naval branch … must not be carried too far."[27] Secretary Welles knew that post war austerity was inevitable granted the record of the past, the innate thrift and pacifism of the legislative, and the unwillingness to tolerate large, standing peacetime forces, but he wanted Congress to remember that the Navy, like an army, still retained a peace time mission—if retrenchment was taken too far it could be harmful to both the Navy and the nation. Under Secretary Welles, in the years from 1861 until 1869, the federal Navy saw sizable swelling and shrinking in numbers and capability. The prewar Navy consisted of forty-two ships boasting 555 guns and was transformed into a formidable and technologically advanced and specialized armada of vastly greater size and strategic reach.[28] By 1864, and the height of the war, the wartime Navy listed over 700 vessels mounting 5,000 guns and displacing half a million tons.[29] Many of these ships were steam-driven, armor-plated, and fitted with advanced shell firing guns, things that had been only dreams ten years earlier. Within nine months of the fall of Fort Fisher and in synch with past post war policy, Secretary Welles reduced the fleet to a skeleton of its prewar status with twenty-nine deployable ships.[30] The demobilization included several shore establishments, which were either closed or greatly reduced in capability and capacity. The auxiliary ships, which had been hastily constructed or improvised merchantmen and supported federal forces, were sold or

27 U.S. Department of Navy, *Report of the Secretary of the Navy, 1865* (Washington, DC: GPO, 1865), XXXIII, XXXIV.

28 Lance C. Buhl, "Maintaining 'An American Navy,' 1865-1889," in *In Peace and War*, ed. Kenneth Hagan (London: Praeger, 2008), 113.

29 Sprout, *Rise of American Naval Power*, 165.

30 Richard West Jr., *Gideon Welles: Lincoln's Navy Department* (New York: The Bob – Merrill Company Publishers, 1943), 324.

scrapped. The iron-clad monitors were hastily laid up in salt water basins for future emergencies. The only serviceable ships left in the fleet were prewar wooden hulled cruisers with smooth bore cannons, the best of which were refitted and reassigned for overseas squadron duties in the role of station cruiser that is a solitary vessel to cover an enormous geographical area. The manpower of the Navy was also greatly reduced from a height of 50,000 sailors and 7,000 officers to 12,000 sailors and 2,000 officers.[31] The anticipated period of austerity that followed the Civil War introduced a period of naval stagnation in America that is often referred to as the U.S. Navy's Dark Ages. This now-forgotten period is essential to an understanding of the character of the U.S. Navy and its strategic practice.

The dark ages of the Navy were characterized by a reduction if not a regression in capability, strength, technology, and strategic vision while being plagued with congressional bureaucratic infighting and struggle for power between the line and staff officers. This epoch was also one of conflicted domestic politics, and deep divisions about the path toward national unity as well as the roles and missions of the armed forces, made worse by the onset of a world depression in the 1870s.

In the way that period of 1865 to 1881 is characterized as period of stagnation, the period between 1881 and 1891 is characterized as a time of innovation that brought the Navy into modernity and resulted in a new unified strategic vision. It would be easy to assign the cause of the stagnation simply too drastic reduction in force and budget that followed the war, but when these causes are placed in proper political, social and economic context then their impacts can be properly identified. Under the same method of placing the episodes of innovation that pulled the Navy out of its funk in their proper context each action can be given its due regard.

A. TECHNOLOGICAL MUDDLE: REGRESSION FROM STEAM TO SAIL

Secretary Gideon Welles viewed the large purpose built standing Navy at the end of the civil war with an eye of pragmatism and as a burden on the tax payers who would

[31] Buhl, "Maintaining an American Navy," 113.

never pay taxes in support peacetime for a standing naval force on the European model.[32] Prior to serving as the Secretary of the Navy, Welles had served as the Comptroller for the State of Connecticut. This experience left him with the feeling that he was a custodian for the people's funds; an American virtue of thrift that long characterized the Republican Party of that epoch. Richard West asserts that Welles was able to return the Navy a third of its purchasing expenses through his record for parsimony and economy. During the war Welles purchased 418 ships for the sum of $18,366,681.13 and during the draw down was able to sell 340 of the vessels for greater than $5.5 million. Welles was also able to pay for part of the Navy's war effort with funds gained with captured prize vessels (i.e. guerre de course) in admiralty courts exceeding an estimated $21 million. For all of Welles attempts to pay off the debt of the Navy and return the nation to a prewar norm, he maintained the belief that the nation still required a powerful and modern naval force. On that note he placed the expensive to operate, iron clad, steam powered monitors in lay up for future use, despite the fact that the American technological prowess in the war had sparked further technical progress in the leading navies of the world while the U.S. disarmed.[33]

Welles also returned the Navy to its prewar mission of overseas commerce protection with a fleet that had been built prior to the war. This act of returning to a prewar mission with prewar technologies while dismissing the strategic lessons and technological gains that the war had led to are two of the biggest themes associated with the Navy's Dark Age. The immediate draw down of forces following the war was well anticipated by those in authority, as well was the implementation of budget cuts that would restrict the use of expensive coal burning ships---a simple fact today easily forgotten as to how the advent of the machine ushered in a very different political and economic context to the waging of war at sea. Where the technological malaise came into play was the interplay between available technology, existing built ships, and

32 West, *Gideon Welles*, 324

33 Ibid.

competing strategic paradigms that could not bet fulfilled by the by fleet that followed the war when added to civil military relations of post war America.

Prior to the Civil War, that is in the 1840s and 1850s the strategic imperatives of the Navy had been to support overseas commerce, to protect the American merchant marine from piracy, to provide coastal defense in conjunction with the army and maintain the offensive capability of commerce raiding. These strategic traditions had developed throughout the history of the U.S. Navy with its roots in the Revolutionary War, Barbary Wars and Perry's opening of Japan in 1853. The Civil War had caused the Navy to change its strategy to those that favored blockading southern ports as well as the destruction of Confederate blockade runners and commerce on a wide scale. Along with the change in strategy came the change in technology that was in train in the mid-19th century with the advent of the industrial age. The prewar Navy was neither overly defensive nor offensive in capabilities granted the truths above, but the war and the shifted views of the U.S. Congress following the war would also change this aspect of the Navy since the Navy now faced a task of unseen scale and complexity.

The Navy had a long tradition of experimenting with steam propulsion starting with the *Fulton I*, commissioned in 1814, and *Fulton II* -- two steam driven vessels. Neither ship was assigned to fleet duty, however. The advancements in steam propulsion came not from inside the Navy, which tellingly enough and in the spirit of the times lacked a professional of full time corps of engineers until 1835, but came from the civilian sector in the area of commercial carriers. For the Navy steam was viewed by critics with reason as too unreliable and inefficient. [34]

It was not until the 1842 that the age of steam reached the Navy when two steam frigates were commissioned, *Mississippi* and *Missouri*, and assigned to regular squadrons.[35] Along with the acquisition of steam capable war ships legislation was passed by Congress regularizing the appointment of Naval Engineers.[36] The permanent

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[34] Lance Buhl, "Mariners and Machines: Resistance to Technological Change in the American Navy, 1865-1869," *The Journal of American History* 61, no. 3 (1974): 706, http://jstor.org/stable/1899928.

[35] Frank M. Bennett, *The Steam Navy of the United States: A History of the Growth of the Steam Navy Vessel of War in the U.S. Navy, and of the Naval Engineer Corps* (Pittsburg, PA: Warren & Co. 1896): 32.

[36] Ibid., 40.

addition of a profession Engineer Corps would later lead to professional friction and resentment between the line and staff corps after the war, but their addition was no less important in creating the capacity for the Navy to operate and maintain its new ships. The growth in number of steam ships and the associated Engineer Corps would remain slow until the Civil War when the mission of the Navy changed from that of a blue water Navy to that of a brown water one.

The naval strategy for the Civil War called for the U.S. Navy to focus on blockading southern ports, supporting the army's maneuvers with river patrols, and defense of the American merchant marine from Confederate steam cruisers and the destruction of other Confederate vessels. These missions were best suited for a steam capable Navy as a sail driven Navy would constantly be held prisoner to the winds and tides. As a result of shifting strategic needs the Navy hastily converted its fleet to steam and plussed up its Engineering Corps.[37] As a result of adding the equipment necessary for steam propulsion the Navy was forced jockey the lost space taken up by equipment and coal for the conflicting needs of increased armament, tactical mobility, tonnage limitations and horsepower requirements.[38] Although naval engineers would make strides in meeting the tactical needs of the ships while restricted in the space available for machinery they would not solve the problem for several decades to come. At the same time that the fleet was converting to steam, rapid naval construction by both sides resulted in a shortage of seasoned timber, which would result in an extremely reduced service life for any ships built with unseasoned timber.

The Engineering Corps was able to increase the efficiency of their machinery by placing it lower in the ship, thus giving greater protection from enemy shelling and ensuring maneuverability during battle. The corps also made great strides in engine size, boiler construction, and shifted from paddle wheels to propellers. The USS *Merrimac,* which was authorized in 1854 and converted into an ironclad in 1861, could reach speeds of eight knots in calm waters while producing 1,294 horsepower at the cost of 3.28

37 Buhl, "Mariners and Machines," 707.

38 Ibid.

pounds of coal per horsepower per hour. In 1869 Benjamin Isherwood, using the lessons learned from the war, built the *Wampanoag,* a steam frigate that displaced roughly the same tonnage as the *Merrimac*, but could travel at speeds of sixteen plus knots powered by a steam engine producing over 4,000 horsepower at the expense of only 3.129 pounds of coal per horsepower per hour.[39] Although engineers had increased the capabilities of ships they had yet to solve the efficiency problems associated with steam; the machinery was still too big and coal was too expensive to use in a non-auxiliary capacity. This point was driven home when Rear Admiral Louis M. Goldsborough condemned the *Wampanoag* and its design even though it had set a new speed record that would not be beaten for a decade. Goldsborough even demanded that Isherwood's vessel be stricken from the register and sold.[40] Goldsborough's condemnation of the fastest ship in the world, coupled with Admiral David Porter's order to fit all steam ships with sail, full rigging and to change the propellers from four blades to two, set the stage for what has been argued as the technical regression of the Navy.

The actions of Porter and Goldsborough are less extreme when placed in context. Whereas Isherwood was a casualty of the internal strife between the line officers and the emerging engineer and staff corps his designs were not scrapped solely because of that. The *Wampanoag* was built as a commerce raider in the spirit of the CSS *Alabama* focusing on speed and trading off armor and fire power for the space needed to store the engines and coal, which took up nearly two thirds of the ship's storage. For Goldsborough the *Wampanoag* failed to meet the requirements of a warship, especially one that was to serve during peace time.[41] Other practicalities associated with the shift from steam to sail had to do with logistics and finances. At the time steam was in a transition phase, not new technology and yet not mature the engines were still too unpredictable. The ability to acquire or produce replacements parts throughout the world was difficult or simply impossible. Ships were also still dependent on visual range for signals in order to communicate. If a ship relied purely on steam to sail over the horizon

39 Buhl, "Mariners and Machines," 708.

40 Ibid., 703.

41 Sprout, *Rise of American Naval Power*, 169.

and it suffered a casualty then there would be no way to request assistance. The American fleet was often compared to the British and French fleets, both of whom had non-masted ironclad monitors, yet the comparison of the fleets was not always an "apples to apples" measure in that the requirements of the navies varied from nation to nation, but no matter which Navy, the non-masted monitor was a tool of home defense. Aside from the technical limitation of maintaining the steam machinery, the funds required to fuel them were in short supply. Porter's order to conserve coal was one of budgetary practicality. Not only did the Navy lack a worldwide network of coaling stations it could not afford to pay for the coal even if they had access. The British Navy imposed a similar order even though it had access to a wide network of supplies.[42]

The technological stagnation that the Navy faced at this time was not that they shifted from steam to sail, but it was the institutional way in which they did it. By refitting the steam ships with sails, rigging and two blade screws they made a ship that was ill suited for coastal defense or commerce raiding. The shift in propulsion also had an impact on armor and weapons. An armored rotating turret could not fit on a masted ship, and iron plating added too much weight. The advancements in armament were replaced by prewar smooth bore cannons. As much as the shift from steam to sail was affected by budget considerations, the budget also prevented the Navy from building modern warships capable of keeping pace with other developing European navies. Civil military relations always form a crucial aspect of change in the naval strategy and the weapons of war at sea. Congressional budgets in the post 1865 era coupled with Secretary of the Navy George M. Robeson's mismanagement of funds locked the U.S. Navy in a pattern of obsolescence while foreign navies would make strides in speed, armor, and ordnance as the epoch of imperialism took hold as well as large peacetime forces on a machine basis made ready for war on a standing start basis. Due to budgets and contracts with shipbuilding yards the Navy was forced to constantly prolong "the life of the wooden ships launched before the war, and reconstruct several of the jerry-built

42 Buhl, "Mariners and Machines," 710-712.

wooden cruisers of the war period."[43] This practice of maintaining the old Navy continued until the 1883 when the ABCD ships were authorized.[44] Even as modern ships eventually made their way into the new Navy it would not be until the congressional infighting, interservice rivalry, and a different strategic vision developed that the Navy would be able to emerge from its Dark Age.

B. THE FIGHT BETWEEN LINE AND THE STAFF: MAN, MACHINE AND HONOR

In 1874 the obsolescence of the Navy was brought to center stage during the *Virginius* incident when it was made clear that the Navy was incapable of backing up foreign policy. The *Virginius* was a Cuban owned vessel under American colors (illegally) running arms to insurgents in Cuba.[45] It was captured by a Spanish cruiser and taken to Santiago, Cuba where several of the crew and passengers were tried and hung as pirates. Of those hung the captain and several of the passengers were American citizens. Even some of the British citizens were tried and hung as well. When the news of the incident reached U.S. shores, the public cried out for action.[46] The British dispatched a cruiser, while the United States could only lodge diplomatic protests because the Navy was incapable of intervening.[47] When Admiral Porter attempted to mobilize a fighting force in preparation for a possible war with Spain, he brought together a collection of antiquated ships (the glaring symbols of a decade of naval austerity amid the world depression) that were incapable of operating of as a group (as single ship operations were the American standard at the time) and his hastily formed squadrons could likely be defeated by a single modern warship. This incident left those responsible for the Navy and the line officers with a dilemma, the Navy had to modernize, but what technologies

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[43] Sprout, Rise of American Naval Power, 170.

[44] William McBride, *Technological Change and the United States Navy, 1865-1945* (Baltimore, MD: Johns Hopkins University Press, 2000) 19.

[45] Lawrence Lenz, Power and Policy: America's First Steps to Superpower, 1889-1922 (New York: Algora Publishing, 2008): 12.

[46] Sprout, *Rise of American Naval Power*, 174.

[47] Lenz, *Power and Policy,* 12.

would be needed and how would this modernization affect the balance of power between the engineering (staff) corps and the line? This geopolitical, civil military, institutional and technological problem reveals more about this subject than the state of the Navy in the year 1874.

The struggle between the line and the engineers is often summarized by focusing on the sociotechnical framework that existed at the time, but the simple truth of the matter was that the crux of the conflict was the result of legislation from the mobilization of the Civil War fleet and several other laws that threatened the power base of the line by improving the status of the staff corps at a time of enduring austerity, domestic political turmoil and legislative grid lock. The sociotechnical argument is that the line officers, supreme in their profession as ship handlers and war fighters on sailing ships, were placed in a defensive position against a newly emerging technology (steam) and the professionals needed to operate it. Admiral Porter's orders to rig full sail on the team ships along with Goldsborough's dismissal of the *Wampanoag* focus on this argument, decrying the line as defenders of the status quo who reject new technologies.[48]

In 1863 Welles set the stage for strife between the line and staff by raising the relative rank of senior staff officers to captain in recognition of their service during the Civil War.[49] Whereas rank was codified in the new legislation promoted by Welles the question of command was a departmental policy, which left the elevated staff corps subject to the whims of the line officers, who by policy and tradition held the right to command. Although the staff officers accepted their new ascension they wanted more, and lobbied for it. Led by the surgeons the rest of the staff corps proposed a bill to that would confer the matching authority to rank and make the ranks between the communities identical. Each of the attempts by the staff was met with resistance by the line, who insisted that a distinction existed between combatant and noncombatant officers. The line also argued that the discipline of the entire Navy was dependent upon the connection between rank and command, and that only combatant officers should be in

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[48] McBride, *Technological Change*, 1-3.

[49] Charles O. Paullin, *Paullin's History of Naval Administration 1775-1911* (Annapolis, MD: U.S. Naval Institute, 1968), 314.

charge of a fighting force.[50] In an attempt to the fight legislation with legislation the line proposed the creation of a board of survey with the intent that it would be able to reduce the power of the Navy Bureau Chiefs or even eliminate their bureaus. In an attempt to settle the quarrel between the warring factions of the Navy congress passed a bill in 1871 that was a compromise, but did little to address the underlying issues and concerns over the rank and command arguments.[51]

The line-staff question was an intra-service rivalry that had a dramatic impact on the Navy's ability to modernize. If the line added new technologies to their aging fleet then they would have to add more engineers possibly placing the careers of future line officers in jeopardy. This friction was also amplified by austerity that followed the Civil War. Congressional penny pinching affected the salaries of all of the officers and coupled with national strategy that left few incentives for young aspiring officers. Salary and career became divisive features between the line and the staff. Part of the anxiety that the line felt had to do with a feature of the mobilization from the Civil War. In the Navy's attempt to rapidly expand at the beginning of the war it recommissioned retired officers and promoted them to the assumed rank they would have made if they had remained in service. This policy created an overslaughing of officers and prevented the appropriate promotion rate for active officers leaving them in a period of purgatory.[52] To compound the problem the swollen officer corps was met with a shrinking fleet—meaning that those who were lucky enough to be placed on a ship could be serving in overcrowded wardrooms. For those officers who were awaiting orders, which could take upwards of a year, they were issued half pay. The resulting dissatisfaction between the officers over the Navy only added to the stagnation of period. [53]

The crux of the staff- line question had little to do with the emergence and regression of a technology and far more to do with the management of a personnel

50 Buhl, "Mariners and Machines," 719.

51 Ibid., 721.

52 Buhl, "Mariners and Machines," 725.

53 Robert, Albion, "The Administration of the Navy, 1798-1945," *Public Administration Review* 5, no.4 (1945): 299, http://www.jstor.org/stable/972501.

system that threatened the livelihoods and careers of several aspiring officers. The mobilization resulting from the Civil War created a bloated officer corps that prevented the natural progression of personnel and when the war ended and the force shrank in the way that it did, it pitted line against staff for employment. The result of the interservice rancor was a movement away from technologies that threatened to increase the power of rival subgroups. It was not until the Navy's impotence was exposed that by the *Virginius* that the line had to make compromises with technology to modernize.

C. CONGRESSIONAL POLITICS AND CIVIL MILITARY RELATIONS

The role of Congress during the Dark Age of the 1860s through the 1880s is one of great importance. Not only was congress responsible for controlling purse string and issuing budgets, but they were also instrumental in supporting programs and shaping manpower. It would be easy to simply say that in the period of austerity that followed the Civil War a war weary Congress retrenched to a prewar national strategy and standard for naval funding, but this would bely the facts and ignores the context in which members of the legislator were making their decisions.[54] Two distinct themes developed in Congress during this period and it would take several catastrophic acts, decades of lobbying, and a change in the makeup of the legislative and executive branches before Congress would change its attitude about the role of the Navy and could fund it appropriately.

The Civil War created a shift in strategic though amongst members of Congress. The war had shown that the United States was capable of mobilizing a powerful modern army in defense of itself and its interests. This coupled with the stopping power of water, meant that the threat of attack and invasion from overseas powers no longer existed.[55] A declining merchant marine along with the internal expansion of the continental United States left congress free to deal with the Navy based on domestic political considerations.

54 Buhl, "Maintaining an American Navy," 113.

55 Lenz, *Power and Policy*, 7.

Congress also felt that the smaller peace time fleet, although becoming rapidly obsolete was perfectly adequate to meet the nation's needs.[56]

The extreme partisan politics that plagued the U.S. Capitol following the war directly affected the Navy. The Navy became a tool for political manipulation. Radical Republicans immediately began attacking the Navy and Gideon Welles following the war with accusations of corruption and extravagance. These attacks were based on Welles support for President Johnson's reconstruction policies. The Navy was even subject to attack during presidential campaigns. The Republican Party in 1868 proposed drastic cuts to naval funding with the intent that it would discredit the Johnson administration, limit Welles' political sway, and create a narrative for reducing government spending.[57] The following election campaigns in 1872, led by critics of the Grant administration, focused on Secretary of the Navy George M. Robeson accusing him of criminal misuse of his office. The result of this was a tarnished image of the Navy, reduced faith in naval contracting, a congressional investigation, and move to further funding cuts.[58] It would not be until 1874 when Democrats were able to seize control of the House and bypass partisan politics that Congress would be able to effectively move in a direction to could pull the Navy out of its spiraling decline.

As mentioned earlier, the divide between the line and the staff was only exacerbated by budget reductions from Congress, but the intraservice fight was also used by Congress to make further reductions to naval appropriations, and these reductions would only exacerbate the Navy decent into obsolescence. The line officers in their fight to save their careers and preeminence over the engineers provided support to Republican Congressman Elihu Washburne's accusations of departmental extravagance in exchange for support from the radical Republicans to press their side of the fight against the staff. The result of the line officer backed Republican move to reduce naval spending were cut so deep that the Navy could not afford to man its larger cruisers meant for foreign duty,

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56 William Peterson, "Congressional Politics: Building the New Navy, 1876-86," Ar*med Forces and Society* 14, no. 4 (1988): 490.

57 Peterson, "Congressional Politics," 490.

58 Ibid., 491.

the iron clad ships that were placed in layup went to rust, and the modest ship building programs that had existed dried up. In essence the line officers had cut off their own noses to spite their faces; they had become kings of nothing.

Meanwhile Congress focused on the development of the interior of the nation while neglecting to develop or maintain a Navy that was capable of enforcing their foreign policy and other nation-states built powerful modern navies. The disproportion in naval strength between the United States and other powers became starkly apparent to Congress in 1873 during the *Virginius* incident. Although Congress as whole realized that the Navy required modernization and vast increases in funding, it would be the old game of elections and partisan politics that would stand in the way of pro-Navy legislation for the next several years. The first issues that prevented a required amount of unity to pass needed legislation were the scandals that surrounded Secretary of War William Belknap and Secretary of the Navy Robeson. In the 1876 presidential campaign, the Democrats were able to run on a platform that included the claim that the dilapidated state of the Navy was proof that it was rife with corruption and that corruption was all the fault of the existing administration. This time the line officers, represented by Admiral Dixon Porter, sided with Congressman Whitthorne and the Democrats to aid in the defacing of their service secretary. With the aid of Porter, Whitthorne was able to gather evidence and present his findings to Congress (without the consultation of the Republican minority) that Robeson had been rewarding his friends with contracts, and shifting funds between his bureaus without the consent of Congress to cover his deficiencies. The House Judiciary Committee ruled that there was insufficient evidence to impeach Robeson, meaning that it was again time for partisan politics to impact the Navy and another record low funding bill was passed the following year.[59]

Although Robeson was not impeached he was replaced as Secretary of the Navy by Richard Thompson, a man that was dedicated to restoring the legitimacy of his post and keeping the Navy out of the negative limelight. Through strict budgetary controls and investigative boards Thompson was able to restore the proper relationship between

[59] Peterson, "Congressional Politics," 494.

Congress and the Navy. Finally in 1878 Thompson was able to gain the needed support of congress to have a bill presented that would support the construction of new ships, but as 1878 was an election year, partisan politics once again took over and the Navy was left to wait. Feeling frustration the Navy took to press to plead their case for funds. With popular periodicals like: *Harper's Weekly*, the *New York Times*, and the *San Francisco Chronicle* running stories that highlighted the state of disrepair that the Navy was in members of Congress were forced to do something or answer to their constituents.[60]

Finally, as the 1880s approached, partisan politics would work for the betterment of the Navy. Democrats not wanting Republicans to receive credit for passing legislation to modernize the Navy acted swiftly to authorize the building of two new steel steam powered cruisers. Eventually with enough prodding the Navy was able to get the Naval Appropriations Act of August 5, 1882 passed. This legislation passed not for the betterment of the nation, but to spite opposing political parties and create a favorable image in the public sphere. The Act was not monumental in that it ensured the allocation of new ships, but in that it prohibited the repairing of outdated rotting ships that were eating the budget alive.[61]

The partisan politics that followed the Civil War pitted one side against the other and used the Navy as pawn for creating policy and campaign platforms. The fight over reconstruction resulted in deeper than anticipated cuts in Welles' post war fleet. The fight for Democrats to regain control in the House resulted in delays in naval construction. It was not until one party controlled both the White House and Congress that a new naval construction bill would be passed. At the same time that congressional politics held the Navy hostage, the Navy did its part to ensure that continued to spiral into disarray. It was not until both parties had to be forced by incidents like *Virginius* to rethink the strategic necessities of the nation and build a new Navy.

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60 Ibid., 498.

61 G. T. Davis, *A Navy Second to None: The Development of Modern Naval Policy* (Westport, CT: Greenwood Press, 1940): 37-38.

D. CONCLUSION

The period of austerity that followed the Civil War was anticipated and planned for by Secretary Welles. It was not the inevitable reduction of funds, manning or ships that caused the Navy to spiral into its Dark Age, although budgets did play an important role. At the end of the war the Union Navy boasted one of the most technologically advanced fleets in the world, the only problem was that these advanced ships were purpose built for the war with the south and not suited for peace time missions in overseas squadrons. The majority of the ships were built ad hoc with substandard material meaning that they would have shorter service lives and or require continuous and expensive repairs, leaving the Navy a few ships quality built ships with prewar designs and technology. The regression from steam to sail was not a problem for the Navy in the beginning because it reflected budgetary and logistical concerns that would not be overcome until steam efficiency issues could be resolved in the 1880s. However the movement from steam to sail did cause the Navy to enter a period of technological obsolescence as compared to the other navies that continued to make advances in steam, armor, and ordnance. Intraservice fighting between the line and staff exacerbated the Navy's decline, and it was not until incidents like the *Virginius* that both sides were able to come together in a meaningful way. The partisan politics of the reconstruction period used the Navy as a tool to push their agendas and feuds. The *Virginius* highlighted the need for modernization and proper funding, but it would take a decade and a majority in the capital before the needed legislation could be passed to bring the Navy out of its mire.

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III. CRISIS AND FAILURE, THE INTER WAR YEARS

Secretary of War Henry Stimson famously described the leadership of the Navy during the interwar period from 1919 until 1940 or so as tied to "the peculiar psychology of the Navy Department, which frequently seemed to retire from the realm of logic into a dim religious world in which Neptune was God, Mahan his prophet, and the United States Navy the only true Church."[62] The interwar period for the Navy is often described as an epoch of institutional and strategic stagnation dominated by the international epoch of liberalism giving way to totalitarianism and then war; the divided civil military relations of the U.S. Congress; the "Gun Club" battleship officers in a dominant role, interservice rivalry with the U.S. Army Air Corps over the use of aircraft, and the burgeoning sense of peace through legalism highlighted by the arms control agreements of the Washington Conference system which in turn collapsed after 1931. This epoch between the Treaty of Versailles and the bombing of Pearl Harbor saw the Navy focus its energies on solving the tactical problems raised by the Battle of Jutland in 1916 and return to prewar doctrines of the battle line. In the process, the senior sailors ignored the lessons learned from the Great War and its introduction of new technologies that the Navy created its own period of stagnation, but these accusations fail to place proper international and domestic context to the decisions made by the Navy or take into account the geopolitical and national situation in which policies were made. The stagnation that occurred in the Navy during this period was not solely in the form of holding fast to the battleship paradigm (though such conservatism was surely present) or the way naval aviation was employed as an emerging technology, but in the more fundamental problem of interservice rivalry with the army and a separation with congress over policy and strategy. All of which was compounded by external and global factors that made it

62 George M. Baer, *One Hundred Years of Sea Power: The U.S. Navy, 1890-1990* (Stanford, CA: Stanford University Press, 1993) 114.

difficult for Navy maintain strategic preparedness during this period of "crisis and failure."[63].

A. THE NAVY EXPANDS

The expected austerity that came at the end of the Great War was slow to hit the Navy. In the absence of a draw down the Navy expanded its mission and size. This expansion would ultimately result in a naval arms race between Japan, Great Britain and the United States that had its origins prior to 1914 and which extended beyond 1918 with a significant upshot in the world system. The arms race would then result in the Washington Conference system within the treaty system of the early 1920s and, significantly enough, a separation between the Navy's view of strategy and policy. The Navy had expanded its size and strength considerably during the war, such to a point that it was the largest Navy in the world and it remained that way after the war for a couple of important reasons. Although the Navy's expansion was during the war in 1917-1918, the Naval Bill of 1916 was passed prior to the United States entry into the war and was not intended as a war time measure, but as an insurance against the outcome of the war that began in 1914 and in which the U.S. had at first remained neutral. The Naval Bill of 1916 was the product of an initiative started by Teddy Roosevelt and a small group of republicans that feared the United States was unprepared for the world crisis that erupted in the fall of 1914. By 1915 the war in Europe and the associated unpreparedness of the United States became consuming issue for policy makers in Washington; the solution for the crisis became the National Defense Act of 1916, which was devised and guided through Congress by Representative James Hay. The intent of the act was to build up America's naval forces to the extent that no matter which party won the war in Europe the United States would be able to defend its own national interests.[64]

There were several reasons that the Navy did not immediately recede to its prewar strength as would be expected following any conflict. Of those reasons the Navy was

63 William Leuchtenburg, *Franklin D. Roosevelt and the New deal 1932-194*0 (New York: Harper and Row, 1963) xi.

64 George C. Herring, "James Hay and the Preparedness Controversy, 1915-1916," The Journal of Southern History 30, no. 4 (1964): 383.

charged the responsibility of assisting with the demobilization of the army of 900,000 by bringing back the more than two million troops that had deployed to France in 1917-18. The task of returning troops home was so large that the Navy even used former German ships and battleships as transport vessels. While the army could immediately demobilize, as it had so often before, the Navy was still occupied by post war requirements that precluded even the thought of demobilization from sneaking in. Another one of those post war requirements that required a large naval force was the removal of the vast northern mine barrage in the Atlantic. Both missions of removing troops and mines would not be completed until late 1919. Lastly the Navy was tasked with supervising affairs in the Adriatic Sea in the wake of the defeat of the Central Powers and the creation of new nation states there. All of these missions prevented the immediate drawdown of naval forces and provided for growth instead of contraction.[65]

As the Navy found missions in the wake of Versailles in 1919 to continue to operate as a large force President Woodrow Wilson's experiences in at the Peace Conference in Paris would also shape policy that would lead to expanding the Navy. While in Paris President Wilson intention was to spread his idealism of justice, security and peace to the rest of the world in the form of the League of Nations (LON). Disillusioned by the failings of the LON, Wilson ordered the revival of the massive naval building program of 1916 with the intention that if the League could not ensure peace, then the United States would as best it could with its own means.[66] As an expression of the pre U.S. entry preparedness movement and pre mobilization, such as it was, the Naval Bill of 1916 was the outcome of General Board's recommendation to Wilson on how to establish a Navy second to none. After the sinking in 1915 of the *Lusitania* Wilson realized that he a strong Navy would give the U.S. the strategic freedom necessary to support its national interests no matter the outcome of the war in Europe. When he went to the General Board seeking advice on how to achieve strategic freedom through naval expansion the Board responded with the concept of parity with the Royal Navy, a policy

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65 Knox, *History of the United States Navy,* 423.

66 Ibid., 424.

that many had dreamed of, but could only be attempted in the circumstances of 1916 with war exhaustion in Europe and U.S. industry on the march as never before. The U.S. must have a Navy equal in strength to the most powerful Navy in the world.[67] The Naval Bill of 1916 allowed for a five year building program that would increase the U.S. fleet by one hundred and fifty-six vessels; including ten Dreadnoughts, six heavy cruisers, ten light cruisers, fifty destroyers and sixty-seven submarines.[68] Construction on the fleet began immediately, but when the U.S. entered the war in 1917 battleships and cruisers were placed on hiatus so that the yards could focus on building destroyers and transport ships, which were needed to support war efforts. As the Navy expanded with the aid of the naval Bill of 1916, it received another surge in 1918 when the General Board made a war time recommendation of adding another twenty-eight battle ships and cruisers to the fleet. The administration ultimately reduced the number to sixteen battleships, but the end state was that the Navy would exceed parity with and gain superiority over Great Britain—the preeminent seapower of the day.[69]

The increased U.S. naval strength at the end of the war stoked the fires of maritime competition between the United States, Japan, Great Britain, which again was a pre-war phenomenon that became aggravated in the wake of the peace treaties, especially in the Asian theater. Whereas the conclusion of war would normally indicate to belligerent nations a period of austerity and opportunity to drawdown forces—the strategic understanding of seapower was based around maintaining a fleet larger than the next competitor nation. As the United States had increased in strength so to had Japan for whom the war had led to the eradication of the German empire in Asia to the betterment of the Rising Sun. Japan's new strength coupled with its alliance with Great Britain presented a threat to America's national interests in the Pacific and the maintenance of an Open Door with China. New peer competitors meant that Britain also needed to increase the strength of its fleet in order to maintain its position of dominance. Based on the concepts of seapower and the international order the three powers entered

67 Baer, *One Hundred Years of Sea Power*, 59.

68 Ibid., 60.

69 Ibid., 83.

into a naval arms race. It was also during this security crisis that National Defense Act of 1920 came about. The act was most notable for its restructuring of the army, but it created an avenue to address many of the issues of mobilization that had arisen during the Great War and created a path for demobilization that seemed strategically acceptable. The arms race became a very expensive endeavor that the Republican post war congress was reluctant to support. Finally on 8 July 1921, once the Harding administration had taken hold and the demand for normalcy had made itself felt in Congress, after three years of competitive naval building Secretary of State Charles Evans Hughes proposed to Japan, Great Britain, France, and Italy that they meet at mutually convenient time in Washington to discuss arms limitation.[70]

B. THE NAVY CONTRACTS

Prior to the convening of the conference in Washington in 1921, Secretary Hughes requested that the Navy Department present him with a standard to judge naval armament and recommendation for reductions. While the General Board wanted to complete the remaining capital ships authorized by the Naval Bill of 1916 Secretary Hughes and the Assistant Secretary of the Navy Theodore Roosevelt Jr. insisted on an immediate stop in construction to end the costly arms race between the three powers. The Wilson administration had focused on building a Navy capable of winning wars and "creating a guardian for the new international order."[71] Contrarily the new Harding administration was focused on decreasing the Navy with the intent of preventing another war and satisfying domestic political needs.[72] The Assistant Secretary then entrusted Captain William V. Pratt with the responsibility of drafting a plan for Secretary Hughes to present to at the opening of the conference in November.[73] Assistant Secretary Roosevelt also gave the stipulations that the reduced force would need to maintain the

70 Sprout, *Rise of American Naval Powe*r, ix.

71 Michael Vlahos, *The Blue Sword: The Naval War College and the American Mission, 1919-1941* (Newport, RI: Naval War College Press, 1975) 38

72 Baer, One Hundred Years of Sea Power, 93.

73 Sprouts, *The Rise of American Naval Power*, x.

Monroe Doctrine, not make any concessions over sovereignty or the safety of its citizens home or abroad, and be prepared to defend commercial interests with force if needed.[74]

Captain Pratt was a protégé of Admiral William Sims, champion of Anglo-American alliance, and a tradition Mahanian. As such Pratt measured a nation's naval power in terms of battleships and heavy cruisers. Pratt also detested the Anglo-Japanese alliance that had been formed after the first Sino-Japanese war to ensure that each party could carry out its interests in Asia without interference form the other while maintaining the needed support to discourage would be aggressors like Germany or Russia. Pratt's plan for arms reduction focused on parity of tonnage for capital ships between the United States and Great Britain while retaining an advantage over Japan.[75] As it stood the Anglo-Japanese alliance created a numerically superior force in Asia that could threaten the Open Door Policy in China; Pratt's plan included provisions that would dissolve the treaty between the two powers. The end result of Pratt's strategic calculus was a recommended ratio for the U.S., Great Britain, and Japan of 5:5:3 respectively.[76]

As the conference approached Secretary Hughes had three options for shaping the outcome of the multinational negations in his favor. He could open the conference and delegate the functions of disarmament to various committees, which would surrender the U.S. to the mercy of conflicting national rivalries and likely fail to yield results. This option was scrapped. The second option was lay the maximum concessions of the U.S. and hope that other parties would follow in good faith. This option would probably lead to minimal concessions by Japan and Great Britain leaving the U.S. strategically vulnerable. This option was also scrapped. The final option was for Secretary Hughes to lay concessions not only for the U.S., but also for all other involved parties. This option would allow Hughes and President Harding to maintain control of the conference and shift the blame of a failed conference from the President to the participating nations.[77] It was out of these options that Hughes shocked the participants of the

74 Lenz, *Power and Policy*, 232.

75 Ibid., 228.

76 Sprouts, *The Rise of American Naval Power*, x.

77 Lenz, *Power and Policy*, 232.

conference when he opened the first plenary session on 12 November 1921 by proposing that all parties cease construction of all capital ships still underway and scrap scores of pre-dreadnoughts. Following the 5:5:3 ratio recommended by Pratt, Hughes also sought the reduction of tonnage for capital ships to 525,000 tons for U.S. and GB and 315,000 tons for Japan.

The war weary public reacted to Hughes' demands with euphoria, while the naval experts from all nations dug in there heals and began a desperate fight to save their national priorities. Senator William Borah whom had been pushing for disarmament for several years declared that it was a "splendid beginning."[78] Others noted that "Hughes sank in thirty-five minutes more ships than all the admirals of the world have sunk in a cycle of centuries."[79] The reaction of the General Board was that

The British requested exemptions on tonnage limitation for light cruisers so that they could continue to patrol the sea lanes that connected their far flung empire and in response to effects of guerre de course carried out by submarines they also requested subs be outlawed. The Japanese wanted more capital ships to ensure naval hegemony in their region. France and Italy as lesser industrial powers with differing views on sea control with emphases on cruisers, destroyers and submarines—the ideal platforms for coastal defense and guerre de course took offense with Hughes propositions. The General Board was also unpleased with Hughes and Pratt, believing that the reduced force would be unable to defend U.S. interests in the western Pacific if they were seriously threatened. After three months of negotiation the result was three separate treaties (Five-, Four- and Nine- Powers Treaties) that established tonnage ratios for capital ships. The concession to Japan for maintaining fewer capital ships was that the U.S. and GB would not fortify any of their territories within striking distance of the Japanese home land.[80] In addition to the agreed upon tonnage restrictions the parties agreed to a ten year naval holiday.

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78 Ibid., 236.

79 Ibid.

80 Sprouts, *Rise of American Naval Power*, xii-xiii.

President Harding and Secretary Hughes had effectively used the potential ship building capabilities of the U.S. as a bargaining chip in affecting foreign policy. The other nations were forced to agree with the U.S. or ante up more funds to maintain the status quo. This was an easy decision for the British who were suffering from a great deal of war debt and out of pragmatism reestablished their strategic paradigm to match a one power standard. As for Japan the naval holiday gave it a break from its excessive armament spending program. In the face of heavy debts, Japan had been spending nearly 48% of its national income on armaments, an unsustainable rate for the island power.[81] For the U.S. the conference was a domestic success; Harding had been able to unite his party under the banner of arms reductions and satisfy the public's demands for disarmament. Harding was able to claim the success where Wilson had failed with the LON. The Anglo- American relationship had been restored if not strengthened while the Anglo- Japanese alliance was replaced with the Three Powers Treaty that favored the U.S. and GB.[82] For the Navy the conference was disastrous, and created more problems than it solved.

C. POST WASHINGTON CONFERENCE NAVY

The limits enacted by the Washington Conferences, although recommended by a Pratt, failed to address the strategic visions held by the Navy at large. The conference defined capital ships as battleships and heavy cruisers as ships that displaced over 10,000 tons and were armed with guns that had barrels exceeding eight inches in diameter.[83] An expectation was made for the classification of the aircraft carriers—their tonnage was limited at 27,000 tons because they were viewed as experimental or placed in the category of auxiliary vessels. The tonnage limit was waived for two U.S. ships, the *Lexington* and the *Saratoga*, which were converted from battle cruisers. Although the British had requested the submarine be outlawed the conference placed no limit on the

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[81] A.W. Hinds, "Sea Power and Disarmament," *The North American Review* 214, no. 792 (1921): 588.

[82] Lenz, *Power and Policy*, 237.

[83] Branden Little, "An Evolving Navy of Great Complexity, 1919-1941," in *In Peace and War*, ed. Kenneth Hagan (London: Praeger, 2008), 183.

size or amount of vessels a Navy could possess. The only limiting factor for subs was that they were to search a vessel before they could legally sink it during war. The limitation on fortifications in the Pacific meant that the Navy could not effectively attack Japan in the western Pacific, nor could it defend the Philippines and the Open Door Policy in China.[84] The naval holiday also meant that the Navy would be forced to upgrade old hulls instead of building new ships with new technologies. This in itself would create a whole other list of budgetary issues that would impact modernization and readiness. With all of the physical limitations placed on the Navy they were forced to reevaluate their battle doctrines and strategic visions.

The Navy authorized under the 1916 Naval Bill was envisioned to support American idealism, unilateralism of action, and enforce the Monroe Doctrine while using the concept of offensive sea control. The concept of offensive as opposed to defensive sea control, which focused on the use of destroyers for direct ship protection and coastal defense, was based around the use of capital ships and what are commonly attributed as Mahanian battleship paradigms.[85] The Navy that was formed by the conference system reflected a different geopolitical vision; one that sought peace through legalism and treaties instead of the traditional real politic lenses that majority of the Navy peered through.

Where the Great War had successfully introduced the submarine as a tool of guerre de course and the airplane as a useful scouting platform it did not answer how they should be successfully employed in guerre d'escadre where the battleship was the center of gravity. The traditional concept of war between fleets used the battleship paradigm and this strategic concept focused on the battleship as the technological basis for the Navy. Nations judged each other's naval strength by quantity of battleships. The nation with the most battleships was deemed to be the superior seapower. This battleship strategy clashed with the recent experiences of the war with Germany, where naval warfare was fought between destroyers, transports, and submarines along the lines of

84 Lenz, *Power and Policy*, 237.

85 McBride, "Unstable Dynamics of a Strategic Technology," 388.

guerre de course. It also required massive support by a nation's policy makers and public because it requires vast sums to build, maintain, and equip a first rate Navy organized around dreadnoughts.

Fleet warfare that focused on the battleship as the center of gravity also used the notion that the greater a ship's tonnage the more powerful it was. For a ship to increase its gun size it would need to increase its hull size by a certain proportion, and then based on the average sized naval cannon in use the ship would need to increase its armor by another percentage. The ship would then need to increase its size again to accommodate the lager engines that were required for propulsion. It was out of this calculus that Pratt developed his ratio for the Washington conference, however tonnage although a useful measurement of strength it fails to take into account technological advancements that increase a ship's lethality without increasing its displacement. It was also out of the concept of tonnage that differing classes of ships grew. Battle cruisers had guns as large as those on battleships, but were smaller and had less armor to accommodate for speed. Then destroyers displacing even less tonnage had both smaller guns and even less armor. Based on speed, armor, and armament the ships that were in like classes would face off. A destroyer was a great platform to escort convoys across oceans and hunt submarines, but it was whole heartedly unfit for combat against a heavy cruiser or battleship, which could sink a destroyer, but was unlikely to be sunk by a destroyer with its smaller caliber guns and short range torpedoes. The submarine sidestepped this notion strength versus strength with the concept of stealth and created a niche for itself as a useful weapon in commerce raiding and as an auxiliary, but because of its characteristics it was unfit for battle fleet on battle fleet warfare. The airplane's introduction in the First World War did little to impact the notion of guerre d'escadre because it was still an emerging technology and lacked the ability to drop heavy enough ordnance or fly extended ranges. What the airplane did offer was a gunfire spotting platform and a tool for coastal defense.[86]

The Navy that emerged from WWI was predominantly made up of officers that had been brought up on the concept that the battleship was defining factor of a first rate

86 Trent Hone, "The Evolution of Fleet Tactical Doctrine in the U.S. Navy, 1922-1941," in T*he Journal of Military History* 67, no. 4 (2003): 1112.

Navy, the limited amount of emerging submarine officers and aviators did impact the Navy's potential for strategic growth. This did not mean that battleship officers ignored their new counterparts or saw them as useless competition. What it did mean was that as the air and subsurface technologies matured that they would be incorporated into the traditional tactics and doctrine. The battleship officers were left with only two successful case studies after the war, one being the Battle of Tsushima from the Russo-Japanese War in 1905 and the other the Battle of Jutland, which had been disappointingly inconclusive.

The battleship officer's sought to use the battle of Jutland as a case study to improve their tactics in the next major war. The U.S. perception of the battle was that the British failed to decisively defeat the Germans at sea because they inadequately communicated and poorly coordinated their forces.[87] These two lessens would drive tactical fleet doctrine throughout the interwar period. The fleet although hampered by the Washington Conferences would focus on the formation maneuvers—to include cruising, approach, and battle formations. The battle formations not only followed the Mahanian paradigm of concentrated firepower, but were also driven by the technological limitations of the 1920s and 1930s all aimed at solving the difficult problem of two moving targets trying to hit each other at sea. It is from this era that the Navy was accused of "upholding the age-of-sail Mahanian gospel and aspiring to reenact Jutland," lead the Navy into a period of obsolescence.[88] Placing the decisions that the Navy made during this period in the proper context illuminates that the Navy did what they could with what they had at the time to prepare for the next potential conflict and that it was not parochialism that lead them down the path of the battleship and not the emerging aircraft carrier.

D. AVIATION AND THE BATTLESHIP

The commonly held view that "the Navy's battleship admirals failed to appreciate the importance of the technological revolution exemplified by the airplane," in the interwar years fails to take into account that naval gunfire was the catalyst that drove

87 Hone, "Evolution of Fleet Tactical Doctrine," 1108.

88 Little, "Evolving Navy of Great Complexity," 182.

early carrier doctrine, not scouting or aerial bombing.[89] The primary role of U.S. naval aviation during WWI was that of coastal defense (primarily against submarines) and shore bombardment. The British on the other hand developed the aircraft carrier, which they used to launch aerial spotters for the purpose of increasing the range of effective naval gunfire. The General Board took notice of this advent and recommended that six carriers be included in the 1920 ship building program.[90] Although the board publicly declared that the carries were necessary auxiliary platforms for spotting they followed the British example of spotting missions.

Arguments between carrier advocates, like Admiral William Sims, and conservative voices in the Navy like, then CNO Admiral William Benson, did break out, but they were not over the usefulness of naval aviation, but the need for carriers when seaplanes could potentially do the same job for less. The argument between the two sides was placed to rest before either one could impact the direction of naval aviation when an experiment took place near Guantanamo Bay in February of 1919. The experiment was an exercise in long-range firing by the battleship *Texas* supported by aerial spotting. Equipped with a radio-telephone the pilot was able to provide information about shot falls, and suggest corrections, which directly increase the accuracy of the *Texas's* gunfire to that of 200 percent of what it had been if the ship had only relied on its own crew.[91] As a result the board recommended to the Secretary of the Navy that until funds could be properly afforded to the creation of a purpose built carrier that they convert an old *Jupiter* class collier into the Navy's first carrier. Five years later the converted collier would be rechristened the *Langley*.[92]

While the Langley was being converted the War College in Newport began investigating the potential uses for new technologies that had emerged during the war and applying them to war games. In a war game between Red (Great Britain) and Blue (U.S.)

89 Thomas Wildenberg, "In Support of the Battle Line: Gunnery's Influence on the Development of Carrier Aviation in the U.S. Navy," *The Journal of Military History* 65, no. 3 (2001): 697.

90 Ibid., 698.

91 Ibid., 699.

92 Wildenberg, "In Support of the Battle Line," 701.

forces in 1924 the deciding factor between the two evenly matched sides would be who could obtain the advantage of aerial spotting to increase the accuracy and range of gunfire while denying the same advantage to the enemy. This led Captain Harris Laning, the head of the Tactics Department to theorize that future naval battles would be won by gaining air superiority immediately and attacking the enemy's carries as soon as they came into range. The addition of carriers to the battle line supported the existing center of gravity and did little to change it. The new technologies of the airplane, carrier, smoke screen, and submarine created a new problem for the battleship, it was now being forced to fight at greater distances that it had before, which meant that the aging ships would need to increase their elevation and caliber to remain tactically significant.[93]

E. THE ARMY AIR CORPS AND THE NAVY

Where the generalization that the Gun Club Navy was opposed to aviation is largely a fallacy the interdepartmental fighting between the army's new air corps and naval aviation was quite real. Just as the Navy felt the budgetary axe following the war so too did the army. The expeditionary army that fought the Kaiser had shrunk in force and reverted to a garrison force committed to defending the nation and its territories from invasion. Prior to military aviation the army had manned coastal battery stations, but the advent of the plane allowed for an increased range for coastal defense and an area of contention between the two departments. The Navy claimed that it held exclusive rights for operations over the ocean's water while the army claimed that all land based strike aircraft must belong to the army. The budgetary fight to claim the emerging warfare between the two departments led to interservice rivalry that threatened the coastal defense plans that were the responsibility of both departments. The cooperation between both parties was especially necessary since the Three Powers Treaty limited the fortification of several territories in the Pacific.[94]

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93 Ibid., 706.

94 John Shiner, "The Air Corps, the Navy, and Coastal Defense, 1919-1941," *Military Affairs* 45, no. 3 (1981): 113-114.

The resulting twenty year debate between the two departments over the responsibilities of coastal defense did little to solve the issues. After the Pratt-MacArthur agreement in 1931, where the CNO and Army Chief of Staff hashed out the duties of each department, as to allow both parties access to funds from a congress, which undesirous of peace time defense spending, events like the army's unsuccessful attempted bombing of a the *Mount Shasta* (a target ship) form shore launched bombers placed the roles back up for debate. In the end the neither side was willing to cooperate with the other because of fear of losing funding for their programs. From their failed cooperation came a sense that each department would be able to provide a defense on their own and in a case of crisis would be able to work together. This however was not the case and it been assess that the ambiguity of roles between the services led to a failed reconnaissance that assisted the Japanese in a successful raid on Pearl Harbor in 1941.[95]

F. THE PRESIDENCY AND DISARMAMENT

President Harding's disarmament of the Navy at the Washington Conference to achieve domestic and international goals forced the Navy to reevaluate its tactics, but not its goals. The Navy viewed itself as the "Shield of the Republic" and as such it was determined to prepare for the next war with the next potential enemy based on rival naval strength.[96] The Navy's strategic view of supporting a global responsibility fell in line with Harding's, but not his successor President Calvin Coolidge. Coolidge rejected the global strategic responsibilities and the associated force structure required to support them. Coolidge was a staunch supporter of the Five Powers Treaty that was designed to make aggressive war impossible, and held the view that the Navy was sufficient to defend the United States. Coolidge although aware that building holiday placed the Navy in danger of technological obsolescence refused to partake in playing catch up with the British and Japanese navies. He even deleted funding for three of eight new heavy

95 Ibid., 119.

96 Vlahos, *The Blue Sword*, 30.

cruisers authorized by congress in 1924 with the justification that the new ships would inflame naval competition.[97]

Following a failed Geneva conference in 1927, where Coolidge had attempted to increase the limitations of treaties of the Washington Conferences, navalists attempted to pass legislation that would increase the fleet by seventy one new ships, including five carries, twenty-five cruisers, and thirty-two subs all to be built over a nine year period.[98] The legislation stalled in congress until after the presidential election in 1928 when Herbert Hoover was elected. The Republican successor of disarmament and naval limitation would soon face the end of the ten year building holiday where he assumed that an international arms race would resume.

Hoover not only inherited Coolidge's predisposition for the Five Powers Treaty and the building holiday, but he also believed that the Navy's strategic mission was to defend the Western Hemisphere and not the world or Pacific basin.[99] Where Coolidge had embraced arms limitations in the name of peace, Hoover did so in the name of fiscal responsibility. Under this guise Hoover entered the White House with the intent of extending the limitations Five Powers Treaty to the auxiliary ships, such as submarines and cruisers, which comprised nearly seventy percent of the Navy and whose growth was unregulated. Hoover also wanted to extend the qualitative deference's between warships that tonnage failed to take into account, like technological variations in gun size, armor, speed and age. Hoover's new attempt to categorize ships based on fighting coefficients interested the British prime minister enough to agree to a new naval conference to be held in London in 1930.[100]

Hoover took lessons from the failed Geneva Conference and ensured that the Navy would not be represented in a capacity that could jeopardize his agenda. The London Naval Conference held three items on the agenda: considerations on battleship reduction, parity of auxiliary ships between the United States and Great Britain, and

97 McBride, *Technological Change United States Navy*, 160.

98 Ibid.

99 Ibid., 161.

100 McBride, *Technological Change United States Navy*, 162.

abolition of the submarine. The Japanese however came to the conference with the intent to change the agreed upon tonnage ration from 5:5:3 to 10:10:7, which would support the Japanese defense plan against the United States. After negotiating the three parties agreed that the building holiday would continue until 1936, and limitations on cruisers and submarines would be made to create parity. The limitations on the subs favored the Japanese and their defense plans against the United States. Meanwhile Hoover sold the new treaty to the American public as a savings of $1 billion compared estimated expenditures authorized by the failed Geneva Conference. The continuation of the building holiday meant that the fleet's capital ships would continue towards technological obsolescence and that their aging hulls would continue to eat disproportionate share of the budget than if new ships were built to replace them. The limitations on the subs also meant that the U.S. would be unable to reach the western pacific and threaten Japanese interests with the tools of guerre de course.

As the U.S. and the world entered into the Great Depression Hoover looked to reduce government expenditure, especially through naval expenditures. In 1931 Hoover cut slashed the naval construction budget and suspended naval construction for the 1933 fiscal year. Hoover's action made many on the General Board worry that he would soon budget the Navy out of existence.[101] Internationally Hoover continued a policy of disarmament that appeared appealing to the other nations that were financially crippled by the depression. Luckily for the Navy Franklin Roosevelt, the form Assistant Secretary of the Navy, was elected president in 1932 and discontinued talks of disarmament.

Roosevelt, although a supporter of the Washington Conference, was considered a staunch navalist and subscriber to the battleship paradigm. In Roosevelt began a program of rearmament and even used ship construction a tool of public works. Using the NIRA bill to authorize new construction of several ships Roosevelt rewarded his Democrat heavy regions where shipyards existed. Where Roosevelt began the process of rearmament and refunding the Navy, leading them out of a period of potential obsolescence, his pension towards interfering with technologies and insisting on one

101 Ibid., 164.

platform over anther against the wishes of the general board led to stagnation in areas like aviation, which were less funded that desired.[102]

G. CONCLUSION

The interwar period is often described as a period where the Navy clung to outdated strategic visions, clinging to battleships and Mahan while shunning new advances in aviation and submarines and partaking in interservice rivalries that led towards unpreparedness in the Pacific. The battleship paradigm although not fully tested in WWI was still strategically viable as the airplane and subs were still emerging technologies. As the technologies matured the Navy wove them into their new tactics. The interservice rivalry between the army and the Navy was largely based on a budgetary fight between the two departments, both needing new planes for various roles, but unable to haggle out a deal that would suffice for the nation when congress would not support duplicate production. The Washington Conference, London Naval Conference and associated building holidays placed the Navy in jeopardy of becoming technologically obsolete while running the capital ships into ground. Harding and Coolidge's intentions toward peace through disarmament reflect a separation in strategic thought between the Navy and the presidency. Hoover's concern over the budget created an even greater split between the presidency and the Navy over strategy and threatened to force obsolescence through lack of funding. Roosevelt started to reverse the problems of construction and funding, but his proclivity towards older paradigms and technology prevented growth in new warfares. The Navy's period of stagnation during the interwar period was brought about by a separation in policy and strategy that led to underfunding and budgetary battles.

102 McBride, *Technological Change United States Nav*y, 165.

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IV. ATOMIC ERA NAVY.

On September 19, 1945, less than a month after the Japanese signed the surrender documents aboard the *USS Missouri*, Secretary of the Navy James Forrestal rhetorically asked Congress, "Why should we maintain any Navy after this war?" a question that recognized the spirit of demobilization and war fatigue made more urgent by the advent of the atomic age.[103] The U.S. Navy had become the de facto supreme naval power in the world following the war. Germany and Japan were disarmed and restricted from rearming following their defeats and Great Britain and France lacked the financial might and political will to muster a Navy that could rival that of the U.S.. Secretary Forrestal's question of why should the nation maintain a was answered easily enough with his justifications of the need for security and sea control, but the unasked questions of what type Navy should congress pay for and how big should it be were still in contention. The House Concurrent Resolution 80 recommended reducing the Navy from a fleet boasting 1164 combatant ships and an additional five thousand amphibious and support ships to a moderate 879 combatant ships with enough support and amphibious vessels to support the nation's global role offered up an option for force structure that reduced the number of carriers significantly, but failed to leave the Navy with enough room to address the emergence of new strategic problems which at the close of 1945 were diffuse. The recommended reduction in force size failed to address the advent of the atomic bomb and missiles with warheads on the model of the V2 and their perceived revolutionary effects on the way wars would be conducted in the future. Secretary Forrestal also stated that "Does the atomic bomb immediately destroy the usefulness of all navies now in existence? It does not." [104] Secretary Forrestal argued that the postwar Navy should be a carrier based force capable of launching planes with atomic ordnance or intercepting enemy forces that carried atomic weapons or threatened the United States ability to

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103 *House of Congress Resolution 80: Hearing on House Concurrent Resolution 80, Composition of the Postwar Navy, Hearings Before the Committee on Naval Affairs*, 79th Cong. (1945) (statement of James Forrestal, Secretary of the Navy of the United States), 1164.

104 Ibid., 1165.

control the seas. In the years that followed the Second World War and up until the placement of Polaris missiles aboard the nuclear submarines in 1959 the Navy entered into a period of trial and strategic stagnation defined by heavy postwar austerity, intraNavy parochialism, the National Security Act of 1947—which formed the Department of Defense and gave birth to the U.S. Air Force, a shifting international strategic environment, a brief interlude into the Korean War, but most of all, a return to the interservice rivalry over budgets and missions, and, lastly, the emergence of a Soviet submarine threat in the North Atlantic and beyond.

A. INTRANAVY PAROCHIALISM

The evolving strategic environment that followed the Second World War coupled with advances in technology allowed for policy makers to redefine the national strategic doctrine during the 1940s. The changing doctrine that emerged heavily focused on the strategic economy of airpower and the central role of strategic bombing augmented with atomic weapons. Air power fever reawakened a competition between naval aviators and the Army Air Corps, soon to be the Air Force, over who had the right to carry out which missions and receive the associated funding from congress to do so. In the interwar years the fight between the Air Corps and the Navy over the airplanes and missions had less to do with service identity than it did with funding and search for strategic usefulness in austerity and strategic ambiguity. The postwar interservice competition added the aspect of identity to the mix because of prewar administrative changes within the Navy and the emergence of the aircraft carrier as the new capital ship of the fleet.[105]

The bureaucratic order of the Navy in the years that followed sailing of the great white fleet was often referred to as the "Gun Club," in that it was run by battleship officers—no wonder granted the dicta of Mahan that became a doctrine and dogma. The Navy Department was built upon the construct that the battleship was the capital ship in the fleet and thus all of the higher ranking leadership in the department had been raised to support a strategic paradigm in which battleships remained supreme. In the early years of

[105] Rodger Thompson, *Brown Shoes, Black Shoes and Felt Slippers: Parochialism and the Evolution of the Post-War U.S. Navy* (Newport, R.I.: U.S. Naval War College, 1995) 9.

naval aviation until 1941 a switch to support and promote aviators with in the Navy would have upset the system of command. However, such early aviators that were able to climb the ranks as Admiral John H. Towers, were able to successfully lobby the CNO to reserve high ranking billets for aviators—thus ensuring that they would remain relevant and their strategic concerns would be voiced.[106] Under further pressure from other aviators, CNO Admiral Ernest King, dictated that non-aviator fleet and task force commanders should have aviators for their chiefs of staff and that these new chiefs of staff would be upgraded in rank. The resulting shift in promotions and billeting placed aviators in a position to assume control of the naval bureaucracy, and displace the surface officers.[107]

The shifting power base within the Navy Department was not solely due to an aviation insurgency, but was also a reflection of a shifting view within civilian leadership who lived with the lessons of Pearl Harbor and the doom of army vs Navy nonsense to be replaced by the fight over the atomic weapon. As Secretary of the Navy during the war, James Forrestal had argued fervently before congress that aviation was a vital component for naval strike warfare and that any attempt to reduce or weaken the Navy's air wing would result in a weakened Navy. Under the leadership of Secretary Forrestal aviators were able to gain greater influence in the realm of naval bureaucracy and ensure that their concerns and strategic concepts would reign supreme after the war.[108] Under Forrestal the Navy's evolution from a force capable of conducting strike warfare from battleships to carrier launched aircraft advanced dramatically. The carrier force during the war swelled from six units in 1940 to ninety-eight in 1945, with the increases in aviation in the fleet came a reorganization of the Office of Chief of Naval Operations, in which Forrestal mandated that the Vice Chief and two of the six deputies always be aviators. In addition to the Forrestal's reorganization efforts, congress proposed a reduction in the mandatory retirement age from 64 to 62, meaning that the newly promoted aviators

106 Clark G. Reynolds, "Admiral John H. Towers and the Origins of Strategic Flexibility in the Central Pacific Offensive, 1943," *Naval War College Review* 40, no. 2 (1987): 35.

107 Thompson, *Brown Shoes*, 9.

108 Ibid., 10.

would be able to take over billets and positions previously held by surface officers. [109] From the physical changes in the composition of the fleet to the administrative changes in the Depart of the Navy, the Navy at the end of the WWII had become an air centric force.

B. ATOMIC BOMBS AND SEA POWER

Ever since the turn of the century such technological advances as the submarine and airplane, had placed the capital ship oriented Navy in a position of potential obsolescence. The advent of the atomic bomb accelerated the pattern, like the previous two technological advents the bomb created a lot of tactical questions. Could an atomic bomb sink a ship at sea? Would atomic weapons eliminate the need for a Navy or even an army? Aside from the tactical questions the bomb raised strategic questions. What would be the best way to employ or deliver atomic bombs, and along with delivery systems, which service was best suited to employ them? These questions coupled with post war austerity and the restructuring of the defense department threatened not only the technological usefulness of surface ships, but the very existence of the Navy.[110]

Following the war's end Senator Brien McMahon of Connecticut mentioned that he would like to discover the effectiveness of the atomic bomb against ships. When asking if the surviving Japanese ships could be used as targets, he discovered that too few remained for an effective test. However when air force generals Henry "Hap" Arnold and Barney Giles proposed a similar suggestion to the Joint Chiefs of Staff, Admiral King recommended broadening the test to include U.S. ships. The Navy was already planning on conducting test using conventional ordinance to gather information for the making improvements in naval architecture and extending the tests to include the new atomic bomb seemed like the next logical step. As Operation Crossroads (the Bikini Atoll Nuclear tests) took shape it reawakened the aerial bombing and surface ship vulnerability disagreements form the interwar period. As a joint operation run by the JCS, the command of Crossroads was given to the Navy because they would supply the

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[109] Vincent Davis, *Post War Defense Policy and the U.S. Navy, 1943-1946* (Chapel Hill, NC: The University of North Carolina Press, 1966), 203.

[110] Lloyd Graybar, "The 1946 Atomic Bomb Tests: Atomic Diplomacy or Bureaucratic Infighting?" *The Journal of American History* 72, no.4 (1986) 891, http://www.jstor.org/stable/1908895.

majority of basing, ships, and logistical efforts. By the Navy taking command of the operation they could dictate lay out of the ships, which could have an impact on the effectiveness of ordinance atomic or otherwise. Aside from proving the effectiveness of the bomb on targets a sea the spectacle of the operation was an early use of atomic diplomacy on an international scale. On a smaller interdepartmental scale the operation would be used to dictate which branch of the armed services would receive funding and relevance. As the Assistant Secretary of War Howard Peterson put it, "To the public the test looms as one in which the future of the Navy is at stake."[111] If the bomb sank all of the ships at Bikini then it would sink the Navy for sure, but if it failed to do any significant harm then the Navy could continue to rule the seas unabated.

After intensive planning over ship load out and positioning was conducted the dates were set for the operation. There would be two detonations, one dropped from a B-29 and the other detonated below the surface underneath the primary target vessel. Despite mounting domestic pressures to disarm in the name of peace and to not detonate anymore atomic weapons the operation went on as scheduled and on July 1, 1946 a B-29 carrying the bomb left an island air base on Kwajalein and proceeded to the test area. The bomb was dropped seconds off of schedule and miles off of target. The bomb was so far off target that instead of sinking the ten ships it was supposed to it only affected four ships—none of which were capital ships. Of the ships that felt the blast wave three sank in the first hour of the detonation and two more by the next morning. From the Navy's position an atomic weapon could sink lighter ships that were within half of a mile of a detonation, but heavier ships like cruisers and other capital ships could probably survive although they would require repairs. The continued assumptions from the first test were also applied towards the combat effectiveness of the crews and shipboard systems, without the full understanding of the hazards of ionizing radiation.[112]

The Navy's confidence from the first experiment was short lived when the second bomb was detonated twenty-five days later. The subsurface explosion disintegrated

111 Graybar, "The 1946 Atomic Bomb Tests," 894.

112 Lloyd Graybar, "Bikini Revisited," *Military Affairs* 44, no. 3 (1980): 121, http://www.jstor.org/stable/1987435.

LSM-60 it was anchored to and sinking eight other ships, to include two capital ships. The subsurface explosion also added millions of gallons of heavily radiated water that rained down on ships that were not sunk by the blast to the equation that was not present in the first test. With only fourteen ships sunk by two atomic weapons the Navy decided that it would fare in an atomic war and the only threat would be if a bomb were detonated in a harbor. The expectations of the American public observing the spectacle was that one bomb would sink the entire fleet, create a hole in the bottom of the ocean and cause a tidal wave, but since it did not the bomb became just another weapon. Operation Crossroads succeeded in proving that the Navy was not made obsolete by the advent of atomic weapons, but in doing so it left the door open for future interdepartmental fighting between the air force and the Navy for who had the right to employ atomic weapons.[113]

C. UNIFICATION AND SEPARATION

Operation Crossroads provided answers for the survivability of the Navy in an atomic war, but it placed the services no resolution over demobilization and unification. On V-J Day the U.S. military as a whole bolstered more than 12,000,000 personnel—the bulk of which were in the army and its associated air corps. None of the services expected to maintain their war time strength, least of which the Navy which had started in to prepare its eventual downsizing in 1942 shortly after its victory at midway. The result of the effort was Basic War Plan Number One, and it characterized the Navy's vision of what it would need to maintain control of the seas and prevent future conflicts in face of inevitable demobilization and defense unification. The plan called for a fleet of three thousand plus warships in active duty status and another two thousand plus in inactive reserves along with nearly eight thousand aircraft.[114] The Navy developed their force reduction plan to meet the old strategic requirements that were necessary for offensive sea control, but with the elimination of the Japanese and German navies the need for such a large force fell away and the potential threat of a soviet Navy still loomed far away. As

113 Ibid., 122.

114 Gary E. Weir, "Creating a New Course at Sea, 1945-1953," in *In Peace and War, ed. Kenneth Hagan* (London: Praeger, 2008), 226.

the Navy planned for its downsizing the JCS placed a call for both the Navy Department and the War Department to start planning for demobilization. Although the call went out in 1943 to start planning the JCS left it to the individual services to carry out. The result of separated planning for demobilization was a discrepancy between the forces on their needs and methods. In mid-1945 knowing that V-J Day would be approaching and that the services varied greatly in their post war planning the Joint Logistics Committee (JLC) urged the JCS to prepare a joint policy for the method of releases and separations.[115] The lack of unity between the services was quickly recognized in congress when Congressman John Vorys took up the cause of urging the JCS to form a unified policy on demobilization when he wrote the JCS stating as much. Congressman Vorys' letter to the CJS was a reflection of the public's mood and a foreshadowing of congressional interest in aligning the forces. The JCS then in turn approved a joint policy on "Priority for Return of Overseas Personnel," and an associated plan for their transportation, but the rising public pressures on the executive and legislative branches to accelerate the demobilization became overwhelming. The forced rapid demobilization had immediate effects; with far fewer forces available that planned for the post war deployment of forces plan for occupation and logistical purposes was laid to waste. It also illuminated a newly developing situation in which the quantitative reduction on force size had an exacerbated effect on the qualitative effectiveness of the force. By eliminating key personnel required to maintain sophisticated war machines used by all branches the fighting effectiveness suffered greatly.

General George Marshall while publicly supporting the rapid reduction forces to relieve the nation's financial burdens also noted that the pace of demobilization had disintegrated the armed forces and left America incapable of fulfilling its obligation to the world.[116] Not only had the accelerated demobilization negatively impacted the force structure and readiness of the Army and Navy so too had it negatively impacted foreign policy. Secretary of State James F. Byrnes when made aware of the military's

115 James F. Schnabel, *The History of the Joint Chiefs of Staff: The Joint Chiefs of Staff and National Policy 1945* (Washington, DC: Office of CJCS, 1996) 95.

116 Schnabel, *History of the Joint Chiefs*, 99.

predicament in the spring of 1946 stated "During this period our national commitments will continue without fully trained forces to implement them."[117] Less than nine months after V-J Day the U.S. armed forces had been hollowed to such an extent that they could no longer complete their peace time tasking.

Aside from Secretary Byrnes acknowledgment of military strength not being able to meet desired political ends—incidents in the Balkans where Marshal Tito was challenging Western powers highlighted the plight of the military's ability to respond to crisis while continuing to demobilize. The military as a whole required a plan to build and maintain a post war force in light of international commitments. Under tasking from President Truman the JCS was directed to devise such a plan with the additional consideration of newly developed weapons and how they would impact the relative position of the services. The army proposed strength of 778, 548 personnel with 45 air groups and the goal of expanding to 70 air groups and the Navy proposed a strength of 660,000 personnel. For General Marshall the proposals were too high based on the estimated financial burden that the public would be forced to endure and the ability to maintain a force that large made completely out of volunteers. Out of these considerations General Marshall recommended a reorganization of all forces into one department with universal training and an elimination of duplication. Admiral King on the other hand believed that post war service strength should be based on military policy, strategic concepts, and overseas basing requirements and not financial or man power estimates—those were for the President and Congress to determine.

Finally under General Eisenhower's leadership a final set of numbers was submitted to the President and Congress defining force size requirement. With the numbers question answered the question of unification or maintenance of status quo loomed large. Should the Departments of War and Navy be combined into the Department of Defense or remain separate managing their own autonomy. The Navy wanted to maintain a status quo along with the JCS acting as a coordinated body and possibly create an independent air force, while the Army desired unification in order to

117 Ibid., 100.

streamline efficiencies and reduce redundancy. The Navy based its policy of status quo on the assumption that if combined the army would dominate the Defense Department (DOD). Along with a loss of strategic that would arise from unification the Navy was concerned that the forces could be separated along functional lines. If it flew it would belong to the air force, if it was on land it would belong to the army, and if it sailed it would belong to the Navy. This meant the air force could take over carrier air and the army could take control of the marines and both branches could absorb the respective budgets.

Again General Eisenhower devised a compromise between the army and the Navy. His recommendations to separate the army air corps into its own service and leave the other services to their traditional roles while placing them under the umbrella of the DOD went to the president and became the National Security Act in 1947. The passage of legislation did little to address the consideration of roles and missions between the three branches. It would not be until the Key West Agreements in 1948 that the three services would be able resolve their differences and move forward in a meaningful way. As the first Secretary of Defense James Forrestal brokered an agreement between the three over who was responsible for which functional areas and primary missions, unfortunately the wording in the agreement was sufficiently vague as to leave room for the perpetuation of problems. The Navy would retain its carrier air force and provide close air support for marines, while the air force would provide the army with air lift and close air support.[118] The Navy was also to establish and maintain local superiority in any area of naval operations, and to conduct air operations as necessary for the accomplishment of objectives in a naval campaign. The air force however was charged with gaining and maintaining air superiority, defeating enemy air forces, and strategic air warfare. Where the agreement help define roles in traditional warfare it failed to address who would be responsible for the deployment of atomic weapons, at the time only the air force had the capabilities to deploy them, but with a new platform the Navy could as well.

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118 Morton Halperin and David Halperin, "The Key West Agreement," *Foreign Policy*, no. 53 (1983): 117.

During the period of demobilization that followed V-E and certainly V-J days the Navy approached a point of stagnation in which it's fighting effectiveness was stripped by the reduction of qualified technicians and maintainers. It then approached another point of stagnation when faced with unification, as the threat of severing the marine and carrier air components posed to send the Navy back to a pre WWI mission set. The potential separation of the air component also placed existential threats on the aviator heavy leadership of the Navy. The process of unification had left the Navy with a smaller voice for strategic concerns and another service to compete with for budgetary considerations.

The Revolt of the Admirals

In the face of mounting economizing of forces and shrinking budgets the newly unified DOD created a budget that was shared by three parties and one service's gain was another's loss. As the air force promoted strategic bombing and nuclear weapons delivery as the nation's best and less expensive option for security the Navy's ability to conduct similar missions were placed in jeopardy. A new competition for arose between the Navy and the air force over strategic missions and their associated budgets. Along with emerging mission sets both services shaped their arguments over the right to execute them by developing platforms. The air force used the B-36 bomber as its poster child for long range nuclear deployment, while the Navy proposed the new United States class super carrier as it solution for the ultimate strategic delivery system. The new super carrier was intended to be large enough to launch and recover the heavy bombers that were needed to deliver the large cumbersome nuclear bombs that had just been developed. While the Navy viewed the B-36 as a threat the air force viewed the super carrier as an infringement on its ownership of strategic air warfare.

As the air force continued to expand its strength to seventy air groups with the aid of lobbying groups like Hill and Knowlton (H&K) that represented the aviation industry it continued to consume vast quintiles of the defense budget the Navy's carrier program

was cancelled by Defense Secretary Louis Johnson.[119] The Navy viewed the cancelation of its new carrier as a threat to its continued strategic relevance and charged the air force with corruption in procuring its contract with Consolidated- Vultee for the B-36. In light of the allegations congressional hearings were convened resulting in the clearing of charges of corruption, but the Navy would not let it rest. For the leadership of the Navy the only way to secure its portion of the budget and continue with super carrier was to discredit the air force and best chance of doing that was to attack any portion of the B-36 they could.[120]

Within the second round of hearings held by congress fearing for their survival the Navy's leadership engineered a scandal in which Representative James Van Zandt was given a fictitious document manufactured by the Navy asserting corruption charges over the B-36's procurement. The revolt of the admirals had done little stop the B-36, but it did work as a vessel to gain public awareness of their plight. Prior to the revolt the Navy had secretly developed the office OP-23 headed by Captain Arleigh Burke to lobby for the *United States* in congress and public, claiming that if the carrier were scrapped all of the naval and marine aircraft would be transferred to the air force. Unfortunately the Navy's leadership failed to inform the Secretary of the Navy of their actions and Secretary John Sullivan ordered the office closed and its personnel arrested, but the lobbying had its affect. After the fall of OP-23 both the Navy and the air force conducted stunts to demonstrate their ability to deep range bombing. The air force flew the first around-the-world flight with a B-50 demonstrating the use of aerial refueling, while the Navy launched a Lockheed Neptune on a simulated bombing run where it flew 200 miles then dropped a simulated 10,000 pound bomb (the size of an atomic weapon).[121] Each stunt was intended to undercut the other service's claim to strategic bombing and garner larger budget shares and mission sets at the expense of the other. The Navy even

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119 Karen Miller, "Air Power is Peace Power: The Aircraft Industry's Campaign for Public and Political Support, 1943-1949," *The Business History Review* 70, no. 3 (1996): 298, http://www.jstor.org/stable/3117240.

120 Phillip Meilinger, "The Admirals' Revolt of 1949: Lessons for Today," *Parameters: U.S. Army War College Quarterly* 19, no. 3 (1989): 81.

121 Meilinger, "The Admirals' Revolt of 1949," 86.

contended that the new *United States* was a natural progression in carrier evolution and that it was designed for solely for strategic bombing. This argument was then reversed by the air force who stated that the carrier was of no use in a world where the only possible enemy was Russia and the existing Navy was more than capable of defeating that threat. Siding with the air force's argument and leaning on financial considerations Secretary Johnson scrapped the *United States* and spurred the admiral's revolt. At the conclusion of the second round of hearings little had changed, the air force got the B-36 and the United States remained canceled; the biggest result of the scandal was an increasing divide between the two services that would persist for decades.[122]

D. KOREAN INTERLUDE

Less than two years after the revolt of the admirals and the perceived death of the naval aviation as heralded by the scrapping of the *United States* the Korean War erupted, the NATO became a military organization, and an unexpected vast military buildup permitted the Navy to grow into the force that it had envisioned. The Navy proved its value as a versatile force that could be forward deployed to respond to emerging threats. The carrier as the Navy's capital ship and center of its task groups became the focus strategic importance. Along with the carrier's reemergence in Korea the Marine Corps was also able to prove its indisputable roll as high value asset required for sea power, and thus ensured that it would not be swallowed up by the army and the air force. Korea had offered the Navy an opportunity to prove its strategic worth and purchase the carrier fleet that it wanted. Where the *United States* failed the new *Forrestal* class heavy carrier and a procurement plan emerged as supreme naval platform for conducting sea power operations.[123]

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[122] Weir, "Creating a New Course at Sea," 229.

[123] Baer, *One Hundred Years of Sea Power* 335.

E. STRATEGIC DETERRENCE AND THE NUCLEAR SUBMARINE

Korea had given the Navy the super carrier and ensured the survival of the Marine Corps, but it failed to define the strategic role of the Navy as compared to the air force especially in the face of the emerging soviet threat and repositioning form Asia to Europe as a center of gravity. The lessons of Korea also created a new question: was the new Navy one of carriers or one of amphibious operations? This question was soon left to dust as the national strategic focus shifted back to the economy of nuclear weapons. Korea was viewed as an aberration, and the next war would surely take place in Europe and it would not be a limited conflict, but an all-out atomic assault.[124] With the shift back to Europe a new threat emerged from the Mediterranean and Black Seas. While the U.S. had focused on developing a new carrier fleet after WWII the Russians capitalized on the German Type 21 U Boats they captured after the war and developed a significant Under Sea Warfare (USW) threat.[125] The traditional and tasked role of the Navy to maintain the freedom of the seas and sea lanes of communication (SLOCS) open was threatened by an advanced Russian submarine designed to deny access to the seas. This new threat questioned how could the Navy counter the Russian submarines and still operate strategically around Europe. The answer came in two waves. First the Navy would develop an advanced nuclear propelled submarine capable of defeating the Russian threat. Then once technology matured to a point that it was compatible with policy the Polaris missile would be placed on a nuclear powered submarine.

Europe was set to be the next great battle field after Korea and atomic weapons were going to be ordinance de jur. Within this paradigm the armed service looked inward to the immediate battle for their share of the defense budget. The air force continued to bank on the strategic bomber fleet and the idiom that the bomber will always get through, while the army and Navy sought to check rising portion of the budget dedicated to strategic air power with a little creative competition. The strategic bomber fleet and the *Forrestal* class carriers capable of deploying planes loaded with smaller nuclear devices

124 Ibid., 333.

125 Weir, "Creating a New Course at Sea," 231.

both competed the national role of a first strike platform. The Russians on the other hand were also developing their own bomber fleet and challenging U.S. supremacy. The bomber offered a strong offensive strategy, but when combined with a challenging bomber force it presented policy makers with limited options. The shift had gone from first strike strategies to strategies that feared retaliation. Out of the fear of retaliation there developed a policy of deterrence based around tactical nuclear weapons.[126] It was in this atmosphere that Admiral Burke was able to combine the advancing nuclear propelled submarine fleet that had originally been designed to combat the Type 21 clones in the Mediterranean with the newly developed Polaris missile to create the first ballistic missile submarine. The *Skipjack* class submarines once outfitted with Polaris missiles became the *George Washington* class submarines and provide policy makers a new strategic nuclear option. The new option was assured second strike capability that could be used as a deterrence function in a defensive role. Finally the Navy had a platform and a mission that matched national policy.[127]

F. CONCLUSION

Following V-J Day the Navy faced several challenges to its future survival as a triphibious force, the atomic bomb and apparent success of strategic bombing being the most apparent, but when combined with demobilization demands that exceeded planning the Navy entered a period of strategic stagnation. The army air corps offered strategic bombing as the most economical strategy to achieve the nation's political objectives and defense needs while the Navy struggled to redefine the relevance of offensive sea power and the need for a large carrier centric force. While the Navy struggled to shift from offensive sea power as a mission the lessons of WWII and budgetary constraints of the day forced a consolidation of the Departments of War and Navy into the DOD, which created even greater anxiety among the leadership of the Navy and threatened to strip the

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[126] Lawrence Freedman *The Evolution of Nuclear Strategy* (New York: Palgrave Macmillan, 2003) 92.

[127] Floyd D. Kennedy, "The Creation of the Cold War Navy, 1953-1962," in *In Peace and War*, ed. Kenneth Hagan (London: Praeger, 2008), 247.

Navy of its planes and marines. After the unification the Navy was now in direct competition with the air force for budgets and missions. This new competition took the shape of the B-36 versus the *United States* class carrier and resulted in the Admirals' revolt. After the revolt the Navy was faced with a loss of mission and focus, but through the Korean War the Navy found funding and focus to rebuild itself. Unfortunately the Korean War was left in a stalemate leaving the nation to shift focus from limited warfare in Asia to atomic warfare in Europe. The Navy was once again left to the periphery of the next potential conflict. Fortunately the Navy was able combine emerging ballistic missile and nuclear submarine technologies at the same time that national strategy was shifting to make a new strategic niche and direction for itself.

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V. NUCLEAR POWERED NAVY

During the Congressional hearings over the maritime strategy and need for a 600 ship Navy Secretary of the Navy John F. Lehman responded to questions over evolving Soviet intentions with: "I don't know whether the Soviet naval strategy has changed, but what I think we all know is that their force structure has changed."[128] From the opening days of the Cold War to the fall of the Berlin Wall the Soviet Navy had been identified as the probable enemy of the US Navy in the next war at sea. The early Soviet Navy based much of its force structure on a defensive strategy with an emphasis on sea denial, but with changes in the global environment and shifting domestic priorities the Soviet Navy grew in size and capability to the point that it presented a direct threat to the U.S. Navy and its strategic paradigms. While the Soviet Navy gained steam and direction under Admiral Sergey Georgiyevich Gorshkov the U.S. Navy entered into a period of stagnation. In 1973 the Vietnam War came to a close and the Navy approached another cycle of stagnation and eventual innovation as had been the pattern after major conflicts, but the causes for this stagnant period differed greatly from its predecessors. The fourth epoch that threatened naval relevance is marked less by post war austerity that followed most conflicts and more by the Vietnam Syndrome, an aging WWII legacy surface fleet, shifting national strategies, racial unrest, bureaucratic infighting, an emerging Soviet threat, and rising interest rates. Each of these factors continued drive the Navy towards obsolescence until key leaders were able to make institutional and political changes that eventually lead to the 600 ship Navy concept and a strategy that coincided with national needs.

A. RISE OF THE RED FLEET

After the Second World War the Soviets were identified as the next likely foe that the Navy would face, but they lacked the comparative power that previous maritime

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128 *The 600-Ship Navy and the Maritime Strategy; Hearings Before Subcommittee on Seapower and Strategic and Critical Materials, Committee on Armed Services*, 99th Cong. (1985) (statement of John Lehman, Secretary of the Navy of the United States), 89.

powers held, not to mention that the major buildup of U.S. naval power dwarfed the relative power of all other powers at the time. The disparity of naval strength between the two powers eventually shaped the technologies and strategies that they would employ towards each other, with the U.S. focusing on an offensive carrier base power projection strategy and the Russians implementing an area denial defensive based strategy based on submarines and missiles.[129] Through a series of events starting in the 1960s the force structure of the Soviet Navy radically changed and with it the perception of the Soviet's strategy and goals.

While Nikita Khrushchev held the reins of the Soviet empire he promoted naval policies that reflected the naval doctrine of the Soviet Young School, which focused on submarines, naval air craft, and missile armed patrol boats as a force to oppose U.S. carrier power.[130] In order to ensure that his naval policies were implemented throughout the Navy Khrushchev placed the former commander of Russia's coastal flotillas and river patrols as the Navy's commander-in-chief. As such Admiral Gorshkov followed party lines as remained faithful to Khrushchev's policies while slowly creating a platform of acceptance for a future blue water Navy. As fortune would have it, the Cuban missile crisis would provide a twofold push for Gorshkov's future Navy. The disparity between the Soviet and U.S. forces during the quarantine of Cuba highlighted the need for a strengthening of the Soviet Navy if it were to act as a force capable of implementing national policy and it lead to Khrushchev being replaced by another leader who was more receptive to the idea of a more traditional balanced fleet. These two changes lead to the Soviets increasing the naval budget by double and allowing Gorshkov to build over 900 ships in a decade. While the buildup of Soviet forces coincided with Gorshkov personal ideas that the Soviet Navy needed to be a balanced force of sufficient quantity that it would be capable of preforming all of the tasks needed to ensure Soviet security it would

129 Michael MccGwire*, Soviet Naval Developments: Context and Capability* (New York: Praeger, 1973), 518.

130 Michael Klare, "Superpower Rivalry at Sea," Foreign Policy, no. 21, (1975): 91, http://www.jstor.org/stable/1148055.

take a few more international incidents to convince the rest of the Kremlin of the same.[131]

Some of the incidents that drove the Kremlin to develop the powerful surface fleet it felt it needed to support its interests, allies, and client states were highlighted best by Arab-Israeli clashes in the late 1960s and early 1970s and the Vietnam War. In the Six-Day War, the Soviet backed and armed Arab states attacked Israel and ultimately lost because of preemptive Israeli strikes that neutralized the Arab advantages. The Soviets were unable to directly aid the Arabs for fear of intervention of the U.S. naval presence in the region and thus drove Soviet leaders towards acquiring great surface naval power that could in future events reassure their allies of their solidarity. Then again in the Yom Kippur War the Soviet backed Syrians and Egyptians attacked the Israelis and fought to a standstill. Due to the buildup of Soviet naval forces between 1967 and 1973 the Soviet presence created a standoff between the U.S. and Soviet navies that allowed the Soviet's to ensure their allies that the U.S. would not interfere. The limited success of the conflict and associated confrontation led Soviet policy makers to continue to promote Gorshkov's policies and build up.[132] Similar to the Arab-Israeli experiences the positioning of Soviet ships in Haiphong Harbor in Northern Vietnam during the Vietnam War prevented a massive amphibious assault on Northern Vietnam by U.S. forces and added fuel to Gorshkov's policies. In each instance the growth of a balanced, technologically advanced Soviet fleet allowed the Soviets to promote their policies and protect their interests in the face of U.S. opposition. The policies of developing the fleet to support Soviet regional interests were not limited to the Eastern Mediterranean, but also extend to the Indian Ocean and national strategic interests.

As the U.S. Navy had invested in nuclear powered submarines to hunt the threat of the Type-21 clones in the Baltic and the Mediterranean seas, so too did the Soviet Navy invest in anti-submarine (ASW) capabilities to counter the new *George Washington* submarines and their Polaris missiles. Not only did the Soviet Navy use a portion of its

131 Klare, "Superpower Rivalry at Sea," 93.

132 Jonathan E. Czarnecki, "Confronting All Enemies: The U.S. Navy 1962-1980," in I*n Peace and War*, ed. Kenneth Hagan (London: Praeger, 2008), 270.

Type 285 fleet for anti-Polaris missions, but it also developed several helicopter carrier platforms to undertake the ASW mission. The shifts in platforms and missions from coastal defense to offensive ASW brought the Soviet Navy out of the Eastern Mediterranean and into larger bodies of water like the Indian Ocean where there presence could be openly interpreted. Along with the new Soviet ASW mission came the development of the *Yankee* class ballistic missile capable submarine, which offered the Soviets a level of assured nuclear deterrence that represented another step in offensive based missions and expanding control of the seas into Western based spheres of influence.[133]

Each step that Gorshkov took in expanding and modernizing the Soviet fleet created a since impending rivalry at sea. While the U.S. Navy stuck with its carrier based offensive strategy for all of its missions in containing the communist menace the soviets took chess like strategy that focused on developing weapons and platforms that countered U.S. strengths. The soviet development of surface to air missiles and anti-ship cruise missiles presented a direct threat to the carrier based paradigm that the U.S. was beholden too. The advances in Soviet technology coupled with drastically increased numbers in the fleet and expansion into waters that were previously dominated by western powers presented a threat to U.S. and NATO navies that were at the time in a state of contraction. During this period the Soviet Navy conducted two major exercises, Okean 1970 and 1975, deploying and coordinating over 200 units in a show of force and capability.[134] Strategically the U.S. Navy was faced with an emerged threat that could no longer dominate because they had failed to modernize their surface fleet and diversify their tactics, only focusing on the power of the carrier while the Soviets grew and modernized.

B. ZUMWALT'S RUSTING NAVY

With most major conflicts the Navy goes through a period of rapid expansion at the beginning of the conflict and then at the end it demobilizes to a presumed prewar

133 Klare, "Superpower Rivalry at Sea," 96.

134 Baer, *One Hundred Years of Sea Power*, 399.

strength, but this was not the case with Vietnam. Not only did the Navy did demobilize a sizable portion of the fleet after the war, but also during the war. It was not because the ships were no longer needed, but because they had been driven too hard for too long without the required maintenance they needed or they had become obsolete in the face of emerging Soviet threats. Between fiscal years 1968 and 1974 the U.S. Navy shrank from 976 units to 495, in just a six year period the Navy had shrunk by nearly half.[135] The decline in naval strength corresponded to the increase in air force and army expenditures in Vietnam. While the war raged on in South East Asia the defense budget shifted to support army and air force expenditures and infrastructures at the expense of the Navy. Naval word wide requirements exacerbated the fleets need for repairs and replacements, but the war and shifted budget precluded the ability for the fleet to keep up acquisitions. The only platform that continued to receive sufficient support during this period to increase its numbers was the nuclear sub, as it had created a niche for itself as nuclear deterrent and national asset.[136] The nuclear submarine for that matter was the only naval asset that matched itself with national strategy and not just maritime strategy during these years.

Admiral Thomas Moore was the CNO from 1967–1970 and during that time he witnessed the rise of the Soviet Navy and shrinking of the U.S. fleet. While in office he took notice that the disparity between the two forces placed U.S. nation interests in jeopardy and that because funding levels for ship building had remained at below their 1964 levels for eleven consecutive years the Navy had lost much of its lift capability. No longer could the Navy and DOD for that matter support a 1.5 war, war in Europe and limited conflict elsewhere, and this loss affected U.S. foreign policy.[137] Following Admiral Moore as CNO was Admiral Elmo Zumwalt, assuming his new office in 1970 he took up the cause of voicing his concerns about the Navy. Zumwalt warned President Nixon that the Navy in its current state could not hope to rival the Soviet Navy in

135 Lawrence J. Korb, The Rise and Fall of the Pentagon: American Defense Policies in the 1970s (London: Greenwood Press, 1979), 42.

136 Ibid., 43.

137 Baer, One Hundred Years of Sea Power, 400.

conventional terms and that without nuclear support the Navy could not stand up to Soviet forces.[138] Zumwalt was concerned that if the Navy failed to take a new course that the President could be placed in a similar situation as Khrushchev in 1962.

Part of Zumwalt's concern was that the U.S. was unable to determine if the Soviets separated their strategies from nuclear and nonnuclear in the same way that the U.S. did and as such the U.S. would need overwhelming conventional strength to defeat a nuclear enemy without resorting to atomic weapons themselves. Another one of Zumwalt's concerns was that the current U.S. practice of relying of a carrier strike group to wage a war at sea had been countered by the Soviet's choice of territorial expansion. By the Soviets moving into the Eastern Mediterranean they effectively boxed in the carrier, which a lot of room to conduct operations. The Soviet Okean exercises and Arab-Israeli spats demonstrated that the U.S. was no longer capable of using its Navy to enforce foreign policy and for the U.S. Navy to regain its edge over the Soviets that it would need to modernize and increase its force structure. Zumwalt's predecessor had wanted a force of 850 ships lead by 16 nuclear powered carriers, but Zumwalt was more realistic in his desires based on budgetary issues and the risk reward calculus of a $1.44 billion carrier facing off against a missile capable Soviet cruiser.

Zumwalt's strategy for modernization and procurement took into account the rising risks of Soviet missile technology and the rapid decommissioning of the U.S. fleet. The strategy focused on a balance of high end multi-role warship and low end ships that could be built in sufficient quantity to rival the Soviet fleet. To accomplish his objectives of rebuilding a balanced fleet, Zumwalt looked to reconfigure both the mission of the fleet and its composition. The previous three decades of doctrine had focused on the carrier as the platform for power projection, with an emphasis on sea base strikes against the land. Zumwalt posed that the post WWII Navy had placed all of its eggs in one basket by constantly developing the carrier and its associated wing instead of developing multi-mission platforms that could do more with less. Within the concept that the Navy had become increasing technologically advanced since the end of the Second World War

138 Elmo Zumwalt, *On Watch: A Memoir* (New York: The New York Time Book Co., 1976), 295.

and along with that advancement the personnel required to operate and maintain the equipment developed specialty focused unions that were singularly focused and parochial in nature. The line officers of the Navy had come to look at procurement of the force through the attributes of their specialty or community instead of a broader mission-oriented perspective. It was this bias that had created a carrier dominate Navy with limited strategic options and had allowed the surface Navy to rust into obsolescence. Another result of focusing on platforms and not missions had lead a Navy that favored power projection and not sea control.[139]

As Zumwalt took to the mission of proposing a new fleet comprised of high and low end ships that could control the seas he was faced with confronting personnel issues that plagued the manning of his fleet. High operational tempo, diminishing naval strength, racial inequality and archaic traditions had driven the morale of sailors and junior officers into the ground. Through a series of Z Grams or fleet wide directives he sought to address grievances held by women and minorities in the Navy. The Navy had failed to keep abreast of changing social norms and in such created an atmosphere in which discipline began to break down and race riots broke out on ships. The riots and decreased moral had a multi-fold effect on the combat effectiveness of the Navy, not only did the decrease man power, but they diminished the amount of technically proficient individuals required to operate the advanced machines that made up the Navy.[140]

Ultimately Zumwalt's approaches to reforming the Navy ran into a road block of rationalists and budgeters. Of all of the new ships he proposed only the *Perry* class frigates went into production. The Sea Control Ship that offered a less expensive alternative to heavy nuclear powered carrier was viewed by many aviators as a direct attack on their profession and as an affront to Admiral Hyman Rickover who had developed a powerful lobby in congress to create an all-nuclear-powered Navy at any expense. Zumwalt was however, able to continue weapons programs like the Harpoon missile, which had threatened the sphere of influence of aviators, but returned needed

139 Baer, *One Hundred Years of Sea Power*, 403.

140 Zumwalt, On Watch, pt. 3.

striking power to the surface fleet. In his last year of office Zumwalt testified before congress of the widening naval and the need for more funding, but found the response of traditional Pentagon allies like Senator John Stennis, who said "for some time those who are overzealous or over concerned or have something to sell, have oversold the strength of our possible adversaries and undersold our strength," to be surprising and discouraging.[141]

C. LEHMAN'S 600 SHIP NAVY

For the years that followed Zumwalt's tenure the Navy continued its course of strategic stagnation. The Navy continued to decrease in strength and numbers while it focused on traditional roles of power projection even though its NATO role had been shifted to protecting the SLOCS. The maritime strategy once again failed to match pace with the national strategy that looked to controlling costs, diplomacy, arms limitation agreements with the Soviets, and shift away from the Pacific theater that require a large naval force. No longer could the Navy support the missions it was assigned with the force structure that remained, and due to reduced budgets and increased inflation they could procure the forces necessary to do so.[142]

As a monolithic entity the Navy had failed to speak in a coherent voice to congress to justify is need for a force structure that it required to support its doctrine, instead it largely dictated its needs as a competitor against the Soviets. Within the Navy's argument to congress it failed to address the political and strategic implications of why and what it needed, instead the Navy spoke with many conflicting voices—surface, subs, and air. It was not until 1981 when President Ronald Reagan appointed John F Lehman as the Secretary of the Navy that the Navy found a voice that could cut through the din of the bureaucracy of the Defense Department and drive the Navy in a unified direction.

Admiral Thomas Hayward, the CNO from 1978 through 1982, picked up on Zumwalt's concepts that the Navy needed more than just carriers and offensive striking

141 Klare, Superpower Rivalry at Sea," 87.

142 Baer, *One Hundred Years of Sea Pow*er, 412.

power, it needed sea control. [143] For Hayward had and must stay with high end platforms, as they were the assets that the Navy could use immediately. The concept of a 600 ship Navy was brought about to balance out the carrier force, protect against Soviet missiles, and reinvigorate the Marines and their amphibious capabilities. Secretary Lehman then adopted Hayward's plan and transformed it into the Maritime Strategy. Under Lehman the Navy saw a growth in its force structure—rising up to 594 vessels at its peak. The new maritime strategy finally had a coherent voice under Lehman and it paired nicely with the national strategy. The Navy during the 1980s had been able sell policy makers that it was the diverse force necessary for waging the next war, and in such it developed internal cohesion and demonstrated strategic initiative.[144]

D. CONCLUSION

The fourth epoch of naval stagnation that stretched from the Vietnam War to the mid-1980s highlighted reoccurring themes from earlier epochs and uncovered other factors that threatened obsolesce. The Navy that emerged from the Cold War was one in which it was the supreme force on the seas. The limited wars that it fought it reinforced the concept of the carrier as the supreme platform for projecting power from the sea to the land. Along with a single minded focus on modernizing the carrier force the Navy forgot that the nation viewed the Navy's role as one of strategic deterrence—based on nuclear powered submarines. Just as the Navy's force structure entered its midlife the Soviets heavily invested in developing blue water Navy that could rival the U.S.. This meant that Soviet power grew in the face of a waning U.S. fleet and thus created a scenario in which the Navy could no longer support national foreign policy. Budgetary restrictions and institutional focus on developing nuclear powered heavy attack carriers instead of modernizing the rest of the surface fleet created limited strategic options for the Navy and continued to drive it on a course of strategic stagnation. To complicate matters the Vietnam Syndrome and a delay in addressing social injustices led to race riots

143 Thomas B. Hayward, "The Future of U.S. Sea Power," in *U.S. Naval Institute Proceedings* vol. 105, no. 5 (1979): 66.

144 Baer, *One Hundred Years of Sea Pow*er, 431.

on several ships, which reduced combat effectiveness and morale. Admiral Zumwalt was able to address several of these issues, but his policies were often too radical for traditionalists in the Navy and led to other forms of internal discourse. It was not until Admiral Hayward was able to team up with a likeminded Secretary of the Navy, John Lehman, that the Navy was able to match its strategy with a national strategy and mind itself a national mission and funding.

VI. FUTURE APPLICATIONS

The U.S. Navy has undergone dramatic changes over the last 150 years. Over four distinct periods in this time frame the Navy has charted courses that have taken it through cycles of stagnation and innovation. The Navy is currently on the cusp of descending back down into another period of strategic muddle and institutional disarray if it does not learn from its past and apply the appropriate lessons towards its future.[145] During the Navy's Dark Age that followed the Civil War the Navy entered into a period of nearly twenty years where it lacked the unity and focus to survive the deep congressional budget cuts that forced an obsolete fleet to rust in the yards while the rest of the modern world pasted it by.

The moral of this epoch is that a post war austerity and demobilization by themselves do not instigate stagnation, but when budgets are cut too deeply too quickly and demobilization is done haphazardly it creates a prime environment for stagnation. The interdepartmental struggle for power and authority that followed the Civil War was brought to a head because the budget cuts instituted by a dysfunctional congress placed the existence of the institution and its personnel in jeopardy. While the Navy was suffering through its interdepartmental strife the nation refocused its intentions towards development of the interior. At this time the Navy and the nation parted ways in strategic focus, which only made it more difficult for the Navy to justify its existence in Congress. Lastly, many focus on this period as time when the U.S. Navy went from being the most technologically developed maritime force in the world with iron clad, steam driven ships armed with advanced ordinance and then reverting to sail and smooth bore cannons. The initial reversion from steam to sail was far less impactful as a cause of stagnation than was the forcing of the fleet to remain in an obsolete design while the rest of the world passed it by. The end of the cycle came when the Navy was able to gain enough support in Congress to modernize and support a national vision that looked to sea born trade as a vital national interest.

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[145] Abenheim, "Strategic Development in the U.S. Navy," 1.

The second epoch of stagnation for the Navy was during the Interwar period. Many focus on the Navy's bureaucracy being dominated by the Gun Club during this period as the sole source of stagnation, but in reality it was a combination of factors. Most notably of which were a separation of maritime of Navy strategic goals and national strategic visions. The Navy wanted to prepare for the next war and take its place as the nation's shield while the national focus was on disarmament and naval limitation. The separation of strategies and goals caused the Navy to incur heavy budget cuts that prevented it from continuously modernizing the fleet, instead to meet national missions it drove obsolete ships into ground. In the end it took a Second World War to drive policy makers and naval planners in same direction and fund a modern Navy that could meet the needs of the nation.

The third epoch started shortly after the second finished. Following WWII the cry to bring the boys home resulted in a depleted force that outstripped the Navy's natural ability to demobilize to a postwar strength that could meet national tasking. This hollowed force that could not answer the calls of containment was further placed on the path of stagnation when the threat of unification promised to strip it of its planes and Marines. The advent of the atomic bomb also threatened to force the Navy into obsolesce, but instead of sinking the fleet it created a source of discourse and interdepartmental fighting. The naval aviators that now controlled the Navy were threatened by the new Air Force's mission and budget consumption. No longer did the policy makers see the Navy or its role as strategically important. The cycle finally came to an end when the Navy was able to match the capabilities of the nuclear powered sub with those of the Polaris missile and offer a viable option for nuclear deterrence. By doing so the Navy aligned strategies and capabilities with the needs and goals of national policy makers.

The last epoch of stagnation and innovation that the Navy goes through is different than the previous three in that its decline in strength and force structure was not the result of post war austerity, but poor planning by naval leaders to diversify and continuously modernize. One would have expected the Navy to shrink in force after Vietnam if it had swollen to meet the call of another war in Asia, but that was not the

case. The Navy shrank during the localized conflict and during the overall Cold War in the face of an emerging Soviet threat. As a result of the successes of the earlier adoption of strategic deterrence as a mission the Navy was unable to change its image in Congress and prove that it was capable of more roles in a Europe and NATO centric environment. While the Navy struggled to find its way in the wake of Vietnam it also struggled with the internal disarray that it had created through years of traditional racism. It was not until several years after Zumwalt instituted several reforms in the and testified before congress that the Navy was no longer capable of meeting national tasking in support of foreign policy due to the threat of the Soviet Navy that policy makers and naval leaders took head and made changes. Secretary Lehman's adoption of the CNO's strategy and adapt skills at navigating the DOD bureaucracy were the final key in drawing the Navy out of its post-Vietnam quagmire. With Lehman the Navy finally had a coherent and unified direction that was parallel to national strategy instead of askew of it.

In each of the cycles the Navy entered into stagnation when they separated their strategy from the goals of the nation. National policy makers also drove the Navy into further darkness by not supporting the Navy with the funds and guidance it needed when it was unable to support foreign policy. When faced with demobilization policy makers often forced the Navy into a corner by demanding too much too quickly. Every time that the Navy has been forced to shrink it has placed the jobs of naval leaders in jeopardy, which then translated intradepartmental parochialism and a loss of unified focus. The Navy has often innovated in strategy and policy when it has experienced the inability to enforce foreign policy and has found a foe to plan against. The Navy has also done well when it was able to align its goals with those of the nation or vice versa. The Navy must always look forward to emerging threats because ships take time to build, if it tries to address emerging problems by building platforms for specific roles that will not exist in the future then it is wasting time and money.

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